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Slot machine game - progressive jackpot with decrementing jackpot

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**ORIGINAL**

**COMPLETE SPECIFICATION
STANDARD PATENT**

Invention Title:

*Slot machine game - progressive jackpot with decrementing
jackpot*

The following statement is a full description of this invention
including the best method of performing it known to us:-

*Slot machine game - progressive jackpot with
decrementing jackpot*

Introduction

The present invention relates to apparatus for use with a system of linked poker machines and in particular the apparatus provides an improved mystery jackpot mechanism for use with such a poker machine system.

5 **Background of the invention**

Many schemes have been devised in the past to induce players to play slot machines including schemes such as specifying periods during which jackpot prizes are increased or bonus jackpots paid. Other schemes involve awarding an additional prize to a first player to achieve a
10 predetermined combination on a poker machine after a given point in time. These methods, while effective, add to club overheads because of the need for additional staff to ensure that the scheme is operated smoothly. More recently, with the advent of poker machines linked through electrical networks it has been possible to automatically generate jackpot prizes on the
15 basis of information received from the machines being played which are connected to the system and one such prior art arrangement, commonly known as "Cashcade", counts turnover (or games played) on all machines in the network, increments a prize value in accordance with the turnover (or number of games played) and pays a mystery jackpot prize when the count
20 reaches some predetermined and randomly selected number. In a more recent prior art arrangement, each game played on each machine in a gaming system is allocated a randomly selected number and the prize is awarded to a machine when the game number it is allocated matches a preselected random number.

25 In another recent prior art arrangement, the winning machine is selected by randomly selecting a number at a point in time and decrementing the number as games played on the system are counted until the number is decremented to zero at which time the game (or associated machine) causing the final decrement is awarded the jackpot.

30 In yet another prior art arrangement, the winning machine is selected using a method weighted towards a particular machine in proportion to its turnover.

Progressive jackpot games have traditionally been popular in Casinos. Their main attraction has undoubtedly been their massive jackpot amounts, which are accessible to players on all gambling budgets. However, in their conventional format these games have obvious limitations:

5 However, having achieved a trigger condition which awards to a player a bonus game, the player is not assured of winning the jackpot and must first play the associated jackpot game. Many players are discouraged by the relatively small probability of winning a traditional bonus game.

10 Many of these arrangements have been in use in the State of New South Wales and in other jurisdictions for a considerable period of time, however, as with other aspects of slot machine games, players become bored with such arrangements and new and more innovative schemes become necessary in order to stimulate player interest.

15 In this specification, the term "combinations" will be used to refer to the mathematical definition of a particular game. That is to say, the combinations of a game are the probabilities of each possible outcome for that game.

Summary of the Invention

20 According to a first aspect, the present invention provides a random prize awarding system associated with a gaming console the gaming console being arranged to play a first game or a second game, the first game being a standard game normally offered on the console and the second game being a jackpot game offered for play when the player has achieved a trigger condition, and trigger means arranged to test for the trigger condition and to
25 initiate an instance of the second game when the trigger condition occurs, the second game being divided into a plurality of sub-games, each having an incremental prize such that a sum of the un-won incremental prizes equals a total currently available jackpot prize value of the second game, the player being awarded each sub-game after the first, only if the incremental prize
30 was won in the previous sub-game and the jackpot prize value being decremented by the incremental prize value awarded with the occurrence of each winning sub-game.

35 According to a second aspect, the present invention provides a method of awarding a random prize associated with one or more gaming consoles, each of the one or more gaming consoles being arranged to play a first game or a second game, the first game being a standard game normally

offered on the machine and the second game being a jackpot game offered for play when the player has achieved a trigger condition, the method including testing for a trigger condition and initiating an instance of the second game when the trigger condition occurs, the second game being divided into a plurality of sub-games, each having an incremental prize such that a sum of the un-won incremental prizes equals a total currently available jackpot prize value of the second game, the player being awarded each sub-game after the first, only if the incremental prize was won in the previous sub-game and the jackpot prize value being decremented by the incremental prize value awarded with the occurrence of each winning sub-game.

Preferably, the second game is a simplified game having a higher probability of success than the first game. In a particularly preferred embodiment, the second game provides five reels with four different symbols on each reel and an incremental jackpot is awarded if after spinning the reels a predetermined symbol appears anywhere on the win line. The symbol may or may not be available on each reel or may have multiple instances on particular reels, depending on the size of the incremental prize. In one embodiment, an incremental jackpot of \$1000 is paid every time a bird symbol appears on the win line and the player plays until a non-winning game occurs or until he has played ten bonus games whichever is the sooner.

In an alternative embodiment, the jackpot game can be other than a reel game and for example, it could be a turn of the card where the player gambles on colour (red/black) or some other feature. Alternatively, it can be an animated event such as a boxing match where the player gambles on the outcome.

Preferably, the console includes output means arranged to indicate to a central controller each paid game played or each token bet, such that a centrally recorded prize value can be updated by each such event.

Preferably also, the total jackpot prize available to be awarded in a jackpot game by the system of the present invention, is a monetary amount the value of which is incremented with each paid game played or token bet on each gaming machine or console in the system in response to the respective indicative signals. The invention is also applicable to a standalone machine, where all contributions to the jackpot come from the machine on which the jackpot game is played.

The jackpot prize is preferably prominently displayed, in the case of a standalone machine, on the machine display area, and in the case of a system wide jackpot on prominent displays located about the gaming area, as well as optionally on the display of individual machines. As mentioned
 5 above, the jackpot prize increments with each game played or token bet on each participating machine, but also decrements with each jackpot sub-game won such that the jackpot value displayed at any one time represents the total amount available to be won at that instant. Decrementing of the prize display will also preferably be accompanied by music or some other sound
 10 effect to draw attention to the fact that part of the jackpot has been won and the decrementing should preferably occur by counting down to add drama to the event.

Where used above, the term 'console' is used to indicate a gaming machine, a gaming terminal or other device arranged to be connected to a
 15 communications system and to provide a user gaming interface. In the following description, examples are given which are applicable to traditional slot machines, however the invention should be taken to include gaming systems which include user interfaces other than traditional slot machines.

Brief Description of the Drawings

20 Embodiments of the invention will now be described by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a block diagram of a network of electronic gaming machines to which a mystery jackpot controller according to the present invention is connected;

25 Figure 2 is a flow chart showing a game arrangement according to the invention; and

Figure 3 shows an example of a 5 reel by 3 line window display.

Detailed Description of the Preferred Embodiments

30 In a preferred embodiment of the invention, a new progressive combination provides the Casino operator with a high degree of flexibility. This Link Progressive System is innovative in its progressive approach, and intuitively seeks to "adrenalize" the punter. Unlike conventional symbol-based progressive combinations, the jackpots are won from a second screen feature. The second screen feature is preferably triggered randomly as a
 35 function of turnover although, other more traditional trigger mechanisms could be employed. When a progressive feature is triggered, a second screen

feature game appears. Each progressive jackpot can only be won from this feature game. In one embodiment, a second set of reel strips appears and a simple spin and win feature game commences. When or if a predetermined symbol, such as a bird appears on the win line in the window, then a corresponding incremental progressive jackpot is won. For example, at a particular point in time, the total progressive jackpot may be \$10000, but this prize is not paid in one game, but is divided into ten equal prizes of \$1000, which are played for in successive sub-games of the jackpot game with the progressive jackpot prize being decremented by the corresponding amount for each win. The player wins a \$1000 incremental prize every time he spins the reels and a bird appears on the payline, but, the jackpot game ends with the first sub-game in which an incremental prize is not won. For example, if the player wins in three successive sub-games and then loses, his total prize will be \$3000 and the progressive jackpot will then stand at \$7000 (subject to further incrementation) available to be won in the next jackpot game awarded.

In an alternative embodiment, instead of providing a spinning reel game as the jackpot game, the jackpot game is an animated feature, such as a boxing match or other similar contest where the player is able to bet on the outcome. When the feature starts, the player is asked to select the outcome that he wishes to gamble on and the animation then commences. In the event that the player wins the gamble he is again asked to select an outcome and the process is repeated. As with the previous embodiment, the jackpot game ends either when a gamble is lost or when a predetermined number of gambles have been completed.

It will be appreciated that other types of gambles such as red/black gambles on the turn of a card are equally applicable to the present invention. Typically, these are rapid jackpots with high increment rates and provide extra incentive to keep player interest on these machines.

Progressive jackpots in this format would have obvious advantages to both player and Casino operator:

(i) Many players play for the small jackpot, believing that the probability of winning larger jackpots is too small to realistically ever occur for them. The present invention encourages such players by providing a greater probability of winning a jackpot while still providing the possibility

of winning the big prize. The progressive prize can be divided into as many incremental prizes as the operator thinks desirable.

(ii) Players see the jackpot prize incrementing and decrementing over time and realise that winning the jackpot is achievable.

5 (iii) The introduction of a feature game which produces what can only be described as the "adrenaline rush" - the gambler's natural high. This psyche has been critical to the success of the most successful prior art games.

(iv) Preferably, when a second screen progressive feature is triggered, a bell sound announces to all of the surrounding players that a possible grand jackpot is about to be played for and is designed so that everyone can share in the experience of a progressive win. The rationale behind this, is that progressive jackpots are only ever seen after the prize has been won. Anecdotal evidence of players watching feature games being played in Australian casinos, suggests the drawing power of such games is very real.

Referring to Figure 1 a plurality of electronic gaming consoles 10 are connected to a network 11, to which a mystery jackpot controller 12 and display means 13 are also connected.

Each of the electronic gaming consoles 10 are provided with a network interface arranged to provide a signal onto the network 11 on each occurrence of an operation of a respective console and the jackpot controller. 12 is arranged to receive each of the console operation signals and to increment the value of a random jackpot prize on the occurrence of each of these operation signals.

25 A flow chart for a prize awarding algorithm is illustrated in Figure 2.

Referring to the algorithm of Figure 2, machine contributions go into the prize pool as with known prior art jackpot systems, while the overhead display shows the incrementing prize value.

In step 20 an average jackpot hit rate value is set to be used to randomly generate trigger data for the link progressive games. This value would typically be set from a preset value programmed by the manufacturer to the specification of the system manager. The actual number range and therefore probability of a link feature game being awarded will depend upon the value of a credit in the particular machine and is calculated by dividing the hit rate value by the value of a credit (eg., $\$5000/\$0.05 = 100,000$). The average hit rate value may be fixed for the system but may be varied from

time to time by the manufacturer at the request of the system manager. For every game that is played, a random trigger value is selected in the range determined from the average hit rate value. The player is also allocated numbers from the source range of numbers that the random number is

5 selected from one number in the range being allocated for each credit bet such that the player's probability of being awarded a second screen game is proportional to the bet. The game is then reported (step 22) to the controller which allocates a contribution to the prize pool and compares the trigger value with the values allocated to the player (step 23), if there is a match

10 between the trigger value and the player values (step 24), the player is given an opportunity to play a second screen jackpot game (step 25) comprising a plurality of sub-games. If a jackpot is awarded (ie, one or more incremental jackpots) as a result of the second screen game, the winning machine is locked up (step 28) and the controller awaits an indication that the total prize

15 has been paid and the machine unlocked (step 29). A test is then performed (step 30) to determine if the maximum number of second screen games has occurred and if not the machine plays another second screen game (step 27), otherwise the machine returns to commence another main game sequence at step 22. If the trigger value does not match then there is no link progressive game awarded for that bought game and the controller returns to step 22 and waits for the next console to report operation.

20

By way of example, a second screen feature game might be triggered by an EGM every \$5000 of turnover played, which is equivalent to 100,000 credits on a \$0.05 machine. A random number is generated within a

25 prescribed range of numbers at the EGM at the commencement of each bought game. The prescribed range of numbers have been determined previously, having been calculated from the expected casino turnover, expected jackpot amounts and jackpot frequencies. The prescribed range in this example is therefore 1 to 100,000 and before the commencement of each

30 bought game a random number is generated within this range. A bet of 20 credits will include or "cover" the numbers between 1 and 20 (inclusive). In this case, the number 7 is produced by the random number generator, then the second screen feature game will be triggered. If any number between 21 and 100,000 is produced by the random number generator, the second screen

35 feature game will not be triggered. Similarly, a bet of 200 credits will include or cover the numbers between 1 and 200 (inclusive). If any number between

1 and 200 is produced by the random number generator, then the second screen feature game will be triggered. If any number between 201 and 100,000 is produced by the random number generator, the second screen feature game will not be triggered.

- 5 The example below has been developed using hypothetical turnover data. A trigger of the second screen feature game is expected every \$5884.22 of turnover (ie, 117684 credits on a \$0.05 machine). Increasing the number of credits bet increases the chance of triggering the feature on any bought game.

10

Number of credits bet	Range numbers assigned	Games to hit	Bet/game	Turnover of EGM since last hit (\$)
1	1 to 1	117684.42	\$0.05	\$5884.22
2	1 to 2	58842.21	\$0.10	\$5884.22
3	1 to 3	39228.14	\$0.15	\$5884.22
5	1 to 5	23536.88	\$0.25	\$5884.22
10	1 to 10	11768.44	\$0.50	\$5884.22
15	1 to 15	7845.63	\$0.75	\$5884.22
20	1 to 20	5884.22	\$1.00	\$5884.22
25	1 to 25	4707.38	\$1.25	\$5884.22
30	1 to 30	3922.82	\$1.50	\$5884.22
40	1 to 40	2942.11	\$2.00	\$5884.22
45	1 to 45	2615.21	\$2.25	\$5884.22
50	1 to 50	2353.69	\$2.50	\$5884.22
60	1 to 60	1961.41	\$3.00	\$5884.22
75	1 to 75	1569.13	\$3.75	\$5884.22
100	1 to 100	1176.84	\$5.00	\$5884.22
150	1 to 150	784.56	\$7.50	\$5884.22
200	1 to 200	588.42	\$10.00	\$5884.22

- 15 A jackpot bell set to a default maximum volume level (ie setting 15) will signal the triggering of a second feature game. The jackpot bell should last for a maximum of 3 seconds. Players are alerted by the jackpot bell instantaneously at any point during a game, but the second screen feature game will not appear until the current game (including base game features) are completed.

Referring to Figure 3, one possible second screen game that can be provided on the slot machine 40 embodying the present invention provides five simulated rotatable reels 42 displayed on a video display 41. When the feature begins, the reels are displayed in a stationary position with a random non-winning pattern of symbols displayed. The player is then invited to press the play button 44 to commence a jackpot sub-game and when pressed, the reels will spin and stop. In the event that any one of the reels displays a bird symbol 43 on the payline the player will be awarded an incremental jackpot prize the total jackpot value available will be decremented by an equivalent amount and the player will be invited to play again. The player will continue to be invited to play until either a non-winning game is played (ie, no bird on the centre line) or until a predetermined maximum number of jackpot sub-games have been played. For example, the player might be offered a maximum of ten sub-games with the total jackpot prize divided into ten incremental prizes. Alternatively, other divisions can be employed. The division can be made on the basis of fixed value incremental prizes or the division value can be fixed and the incremental prizes varied in proportion to the value of the total jackpot. In some embodiments, only part of the total jackpot prize might be allocated to a particular jackpot game (eg; a half of the total or some fixed value such as \$10,000).

Each time a player wins an incremental prize, a bell or other audible signal will sound to draw attention to the win and other players around the gaming area will see the total jackpot prize decrementing on distributed jackpot value displays. Preferably, this will be achieved by counting down in a suitable increment to add to the drama of the event. Preferably, the signal will increase in pitch, sound level or duration, or a combination of these features as the incremental prizes add up, to add excitement to the game.

Each sub-game will have a relatively high probability of a win occurring and might, for example, have a probability of 1 in 2 chances, the probability being determined by the number of winning symbols placed on each reel strip.

The instant the second feature game is completed and the sum of the prizes from all of the sub-games have been calculated, the progressive jackpot sign will display the total jackpot that has been won, as well as the jackpot value still available to be won by others. This celebration of the jackpot win is typically conducted in a traditional manner (ie flashing

displays, jackpot alarms, music etc). In preferred embodiments the progressive total jackpot will also be displayed as the sub-games are completed.

The expected jackpots for each progressive are turnover dependent.

- 5 The jackpot frequencies are arbitrarily set to satisfy the specific needs of each casino. Therefore, both expected jackpot and jackpot frequency are installation specific and of course will change from casino to casino.

- 10 As the time between jackpot game awards is related to turnover, the number of jackpot games played by a player and hence their chance of winning is directly related to the size of each bet on each game played.

(1) All machines on the link have a 2nd screen game, be it an animation game or a second set of reel strips.

- 15 (2) Second screen games provided on various machines in the system can be a mixture of incremental jackpot games according to the present invention and other styles of games, thereby giving the player a choice as to the style of game played.

(3) The link has a number of progressive meters (up to 8). All progressives may be linked.

- 20 (4) The second screen game is activated when a machine has reached a predetermined dollar turnover. This is only known to the machine or a controller. For example, the second screen is activated when (an average of) \$150 has been turned over. This means that whenever \$0 to \$300 has been turned over, the second screen appears. The benefit of activating the second screen on turnover enables mixed denomination on the link for the first time.

- 25 The second screen gives the player the chance of winning one of the 4 progressives if a certain outcome appears. For example, a new set of reel strips appear with only 4 different symbols: Jackpot 1, Jackpot 2, Jackpot 3, Jackpot 4. The first time 5 of the same appear on the centre line the stated progressive is won.

- 30 (5) Another advantage of awarding a progressive prize won in a second screen, is that it can be applied to any game.

- 35 It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A random prize awarding system associated with a gaming console the gaming console being arranged to play a first game and a second game, the first game being a standard game normally offered on the console and the second game being a jackpot game offered for play when the player has achieved a trigger condition, and trigger means arranged to test for the trigger condition and to initiate an instance of the second game when the trigger condition occurs, the second game being divided into a plurality of sub-games, each having an incremental prize such that a sum of the un-won incremental prizes equals a total currently available jackpot prize value of the second game, the player being awarded each sub-game after the first, only if the incremental prize was won in the previous sub-game and the jackpot prize value being decremented by the incremental prize value awarded with the occurrence of each winning sub-game.
2. The prize awarding system of claim 1, wherein the second game is a simplified game having a higher probability of success than the first game.
3. The prize awarding system of claim 2, wherein the second game is of the spinning reel type with in which a plurality of reels or pseudo reels is provided with 2-8 different symbols on each reel and an incremental jackpot is awarded if after spinning the reels a predetermined symbol appears anywhere on the win line.
4. The prize awarding system of claim 3, wherein the second game provides five reels with four different symbols on each reel and an incremental jackpot is awarded if after spinning the reels a predetermined symbol appears anywhere on the win line.
5. The prize awarding system of claim 3 or 4, wherein at least one instance of the predetermined symbol is available on each reel or pseudo reel of the machine.
6. The prize awarding system of claim 3 or 4, wherein the predetermined symbol is not available on at least one reel or pseudo reel of the machine.
7. The prize awarding system as claimed in claim 5 or 6, wherein multiple instances of the predetermined symbol occur on one reel of the gaming machine.

8. The prize awarding system as claimed in any one of claims 1 to 7, wherein an incremental jackpot of a predetermined value is paid every time a predetermined symbol appears on the win line.

5 9. The prize awarding system of claim 8, wherein after the trigger condition occurs a series of jackpot sub-games is provided, the jackpot sub-games being provided until a non-winning jackpot game occurs or until a predetermined maximum number of jackpot sub-games have been played.

10. The prize awarding system as claimed in claim 1 or 2, wherein the jackpot game does not employ spinning reels or pseudo spinning reels.

10 11. The prize awarding system as described in any one of claim 10, wherein the jackpot game has a 2 state outcome.

12. The prize awarding system as claimed in claim 11, wherein the jackpot game is an animated boxing tournament in which the player is offered a choice between two competing boxers and the prize is awarded if
15 the player correctly predicts the winning outcome.

13. The prize awarding system of claim 11, wherein the game relies on the prediction of a colour of a card dealt to the player.

14. The prize awarding system of claim 11, where the game relies on the spin of a pseudo coin.

20 15. The prize awarding system as claimed in any one of the preceding claims wherein the console includes output means arranged to output a signal to a central controller for each paid game played or each token bet, a central register being updated by each such event to represent an incrementing prize value.

25 16. The prize awarding system as claimed in claim 15, wherein the system operates over a plurality of inter-connected gaming machines and the total jackpot prize available to be awarded in a jackpot game provided on any machine in the system is a monetary amount having a value which is incremented with each paid game played or token bet on each gaming
30 machine or console in the system of inter-connected machines in response to the respective output signals.

17. The prize awarding system as claimed in claim 16, wherein a current total jackpot prize value is displayed.

35 18. The prize awarding system as claimed in any one of the preceding claims wherein a current total jackpot value is displayed on a display area of the console on a prominent display located in the gaming area.

19. The prize awarding system as claimed in claim 17 or 18, wherein decrementing of the prize display is accompanied by a sound effect.

20. The prize awarding system as claimed in claim 19, wherein the decrementing is displayed by counting down from the original value to the decremented value.

21. A method of awarding a random prize associated with one or more gaming consoles, each of the one or more gaming consoles being arranged to play a first game and or a second game, the first game being a standard game normally offered on the machine and the second game being a jackpot game offered for play when the player has achieved a trigger condition, the method including testing for a trigger condition and initiating an instance of the second game when the trigger condition occurs, the second game being divided into a plurality of sub-games, each having an incremental prize such that a sum of the un-won incremental prizes equals a total currently available jackpot prize value of the second game, the player being awarded each sub-game after the first, only if the incremental prize was won in the previous sub-game and the jackpot prize value being decremented by the incremental prize value awarded with the occurrence of each winning sub-game.

22. The method of claim 21, wherein the second game is a simplified game having a higher probability of success than the first game.

23. The method of claim 22, wherein the second game is of the spinning reel type with in which a plurality of reels or pseudo reels is provided with 2-8 different symbols on each reel and an incremental jackpot is awarded if after spinning the reels a predetermined symbol appears anywhere on the win line.

24. The method of claim 23, wherein the second game provides five reels with four different symbols on each reel and an incremental jackpot is awarded if after spinning the reels a predetermined symbol appears anywhere on the win line.

25. The method of claim 24, wherein at least one instance of the predetermined symbol is available on each reel or pseudo reel of the machine.

26. The method of claim 23 or 24, wherein the predetermined symbol is not available on at least one reel or pseudo reel of the machine.

27. The method as claimed in claim 25 or 26, wherein multiple instances of the predetermined symbol occur on one reel of the gaming machine.

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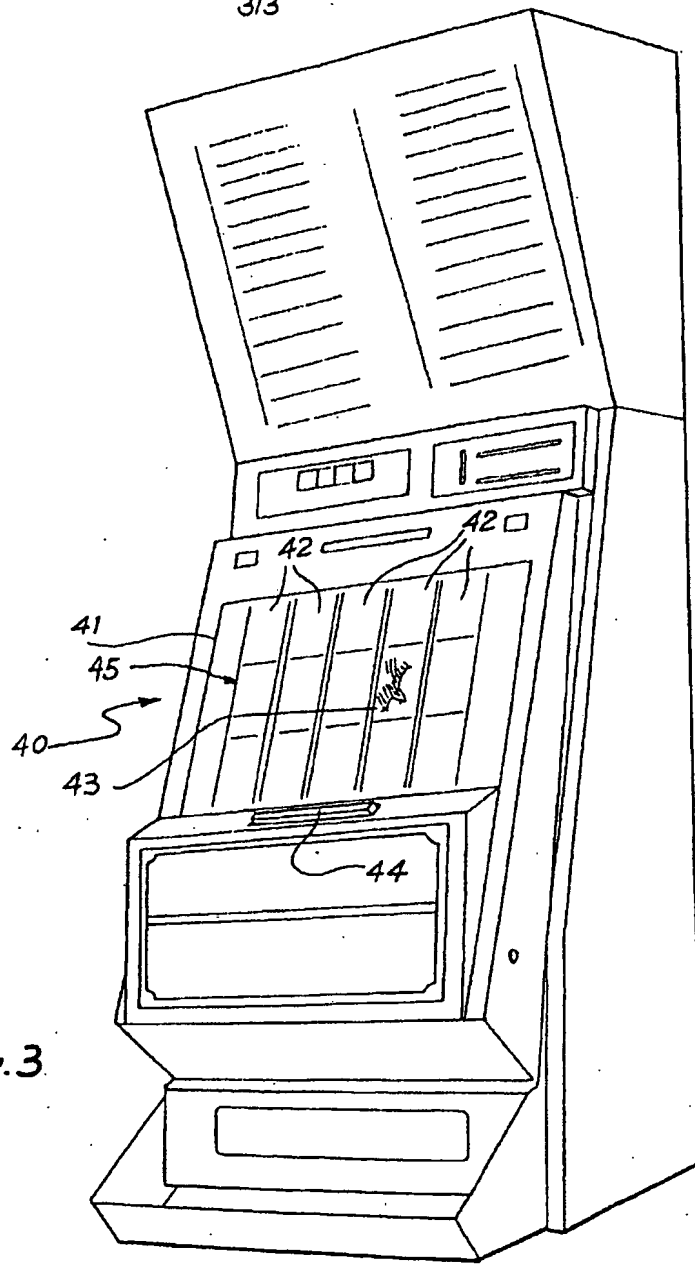


FIG. 3

39. The method as claimed in claim 38, wherein decrementing of the prize display is accompanied by a sound effect.

40. The method as claimed in claim 39, wherein the decrementing is displayed by counting down from the original value to the decremented value.

5

41. A prize awarding system substantially as hereinbefore described with reference to the accompanying drawings.

42. A method of awarding a prize on a gaming console as claimed in claim 21, substantially as hereinbefore described.

Dated this tenth day of September 1998

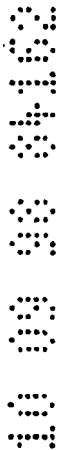
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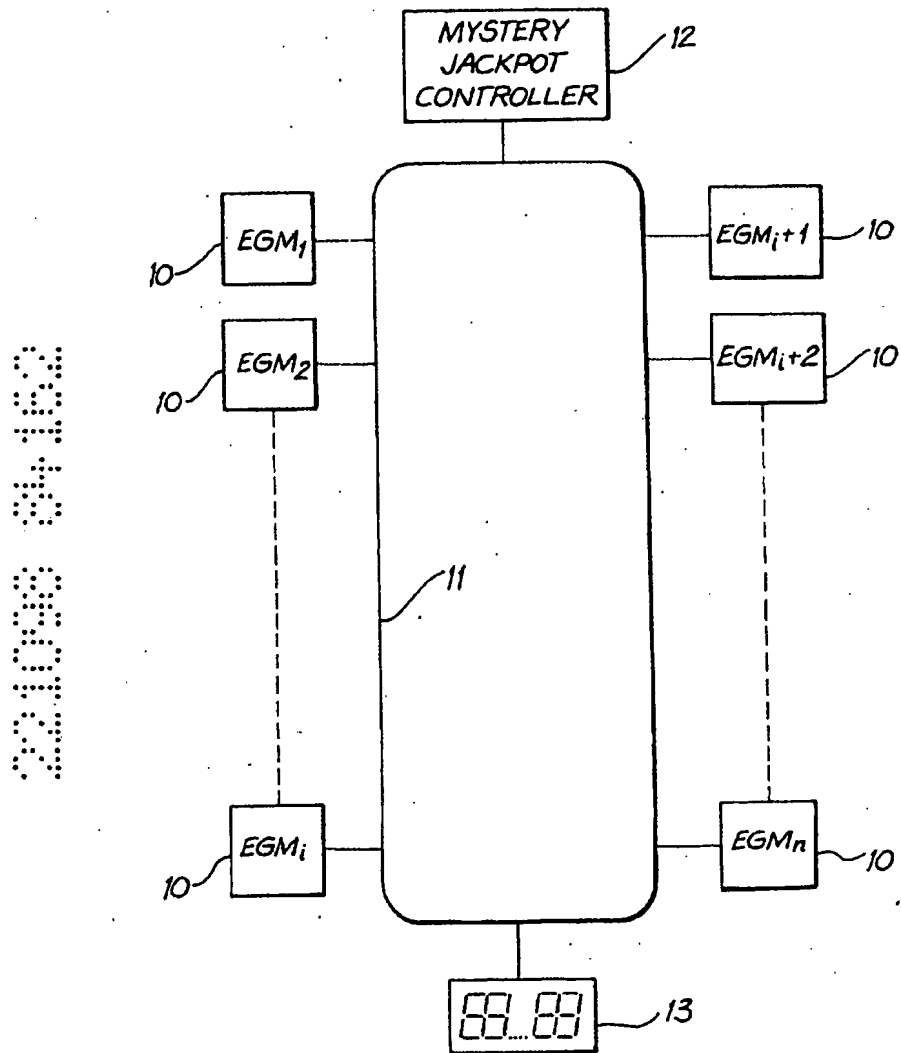
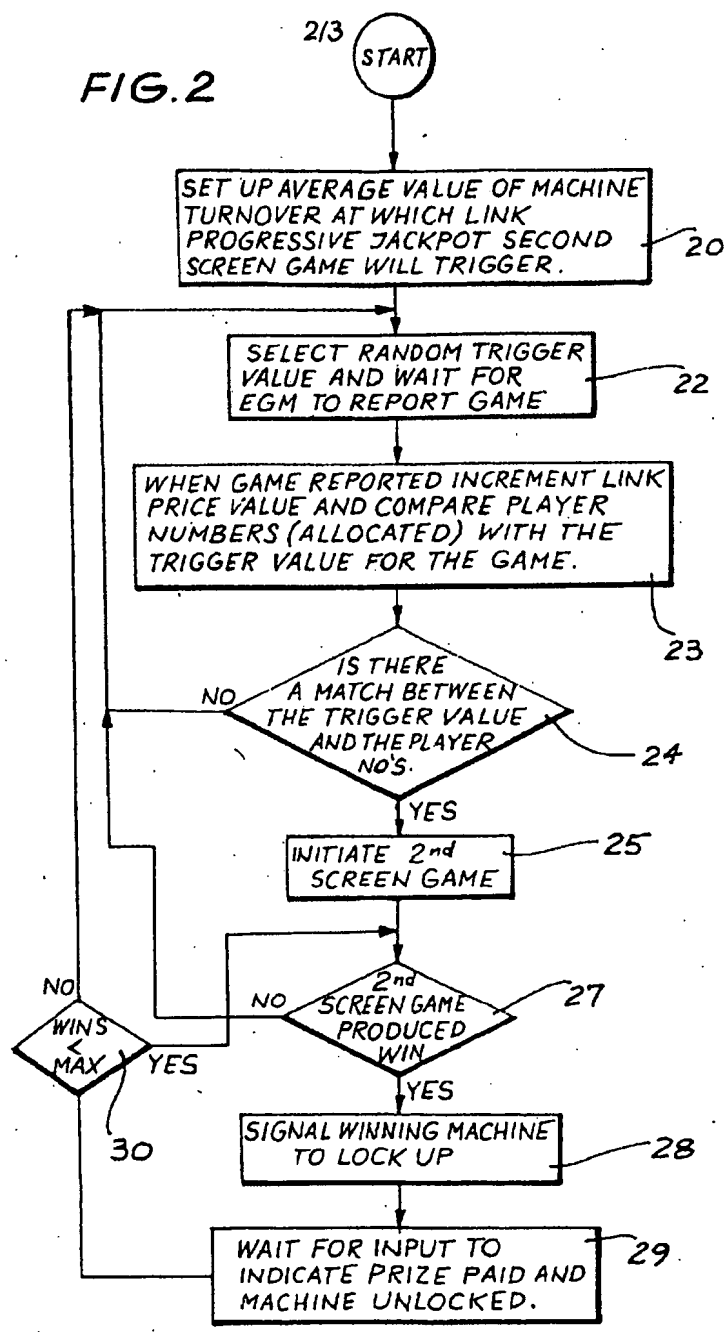


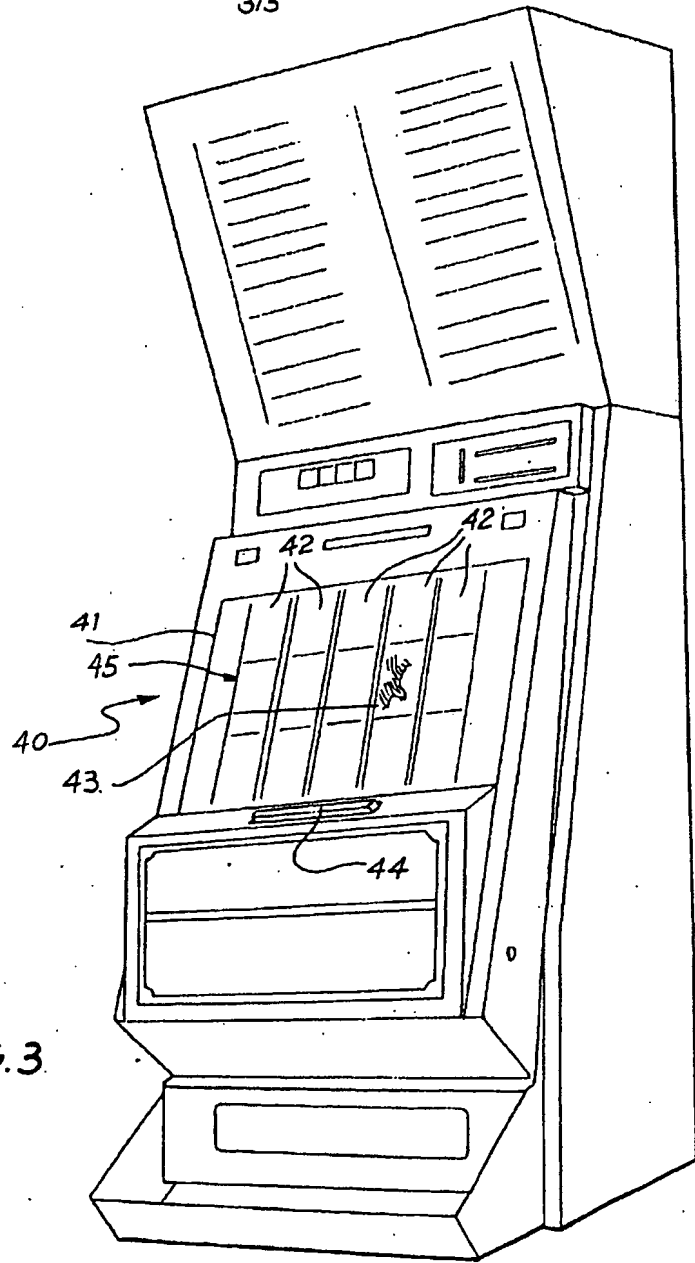
FIG. 1

FIG. 2



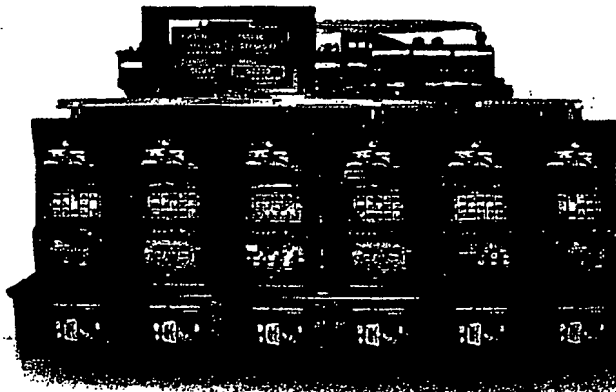
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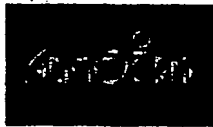
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What is Hyperlink

Hyperlink is a new jackpot system that combines the excitement and simplicity of a mystery jackpot with the power of progressive prizes.

A world first developed exclusively by Aristocrat, Hyperlink is played through a bank of modified Aristocrat games that share a common, second screen feature. Once triggered, the interactive second-screen feature enables players to qualify for one of four progressive prizes. A Random Number Generator, which is built into each game's software, triggers the second-screen feature.

The second screen allows the player a level of perceived participation by allowing them to stop each reel spinning by using the button panel. The Progressive prize, which is awarded to the player, is determined by the accumulated value of the numbers on the reels. (See over for Cash Express.)

The real power of Hyperlink is that players experience frequent jackpot wins (with a chance of winning large jackpots) while enjoying their favourite games with heightened anticipation, excitement and entertainment.

The Advantages of Hyperlink

- 1 Hyperlink can be developed with selected Aristocrat combinations irrespective of denomination or format. Slot combinations, card games and/or keno games are all able to be linked and participate in the same jackpot pools;
- 2 The latest games can be used for a Hyperlink and in time can be upgraded to new game releases – without installing a new Hyperlink Jackpot Feature. Hyperlink is versatile as selected new games can be continually used to refresh the link;
- 3 The NSW market in particular is a feature driven market, and the best Aristocrat games are generally those that have a strong feature or features (eg Penguin Pays, Queen of the Nile, Dolphin Treasure and Chicken). A variety of Hyperlink features have been developed which can be chosen and matched to selected combinations;
- 4 Hyperlink jackpots are frequently won and most players have regular opportunities to play for a jackpot. When the Hyperlink feature is won, everybody in the venue becomes aware that a possible Grand Jackpot is about to be played. Everyone in the venue shares in the experience of winning the jackpot instead of seeing the result only after the prize has already been won. You need only witness the way players watch others playing to experience the immense drawing power of Hyperlink games;
- 5 The relative disadvantage of increasing the bet in conventional progressive jackpot games in the multiline/multiplier format is eliminated. 10 credits produces 10 times as many Hyperlink feature hits as betting only 1 credit; and
- 6 Hyperlink is easily configurable to the operating needs of slot managers and such parameters as jackpot frequency can be easily corrected, in contrast to conventional progressive jackpots which have a more or less fixed jackpot that doesn't allow the venue or operator any flexibility.

Cash Express

Cash Express is the first Hyperlink Jackpot Game for New South Wales. The Hyperlink Feature provides players with the chance to win one of four progressive jackpots. Once the player wins the Hyperlink Feature, they are guaranteed to win one of the jackpots.

The Hyperlink Feature in Cash Express

When the Hyperlink Feature is won, a new set of reel strips appears. The reels are spun and the player is prompted to stop the reel strips by pressing the relevant buttons.

Four different jackpots can be won from the Hyperlink Feature:

- Grand Jackpot** - Won with a Hyperlink Score of 50 or more;
- Major Jackpot** - Won with a Hyperlink Score of 46-49 (inclusive);
- Minor Jackpot** - Won with a Hyperlink Score of 37-45 (inclusive);
- Mini Jackpot** - Won with a Hyperlink Score of 36 or less;

REEL 1	REEL 2	REEL 3	REEL 4	REEL 5
JACKPOT	5	7	6	7
£	£	£	£	£
7	5	JACKPOT	4	4

The reels of the Hyperlink Feature have been stopped in the positions shown above. The numbers on the centre line only are added to the Jackpot Score. The numbers on the rows above and below the centre line are "greyed-out".

There are two different types of symbols on the reels: **STANDARD** (numbers) and **TRAINS** (numbers).

STANDARD numbers are progressively added to the Jackpot Score as the reels are stopped.

TRAINS reveal their bonus points only after all of the reels have been stopped by the player. They then animate across the centre line one-by-one. The animations reveal bonus points that are added to the total Jackpot Score.

In the example shown, the total score is 39. All scores between 37 and 45 win the Minor Jackpot.



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computa
game



EQUIPMENT MANUAL

Revision 1

September 1990

Written and compiled by Russell Campbell

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* = To be documented

continued over...

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OVERVIEW:

Where "Compute Game" systems are installed in clubs, connection is often required between the "Compute Game" Apple IIOS host computer and the club computer system, or ancillary equipment such as a paging system or modem.

The club computer systems are usually of the IBM or compatible type and for the purposes of Compute Game P/L are known as the types:

King St. Computer,
Ace Computer,
Change Bar System,
Ideal Computer,
Quantel,
Pulse.

Some clubs employ a paging system, current connection specifications are for the type/s:

NIRA (Teletrecer).

In some instances a club will require, of the Computagame installation, the ability to upload or download software such as system revisions etc. remotely: via a modem connected to the Apple IIOS host at the club. At present however there are no standard interface specifications for this form of activity, the installations that have this facility having been specially set up according to their requirements. There is no doubt however that this facility will become a standard option in the near future.

Connection Method:

The inter-computer physical connection is accomplished via a serial link: which requires the fitment to the Compute Game Apple IIOS of an Apple Super Serial Card and the use of a connecting cable between the two computers.

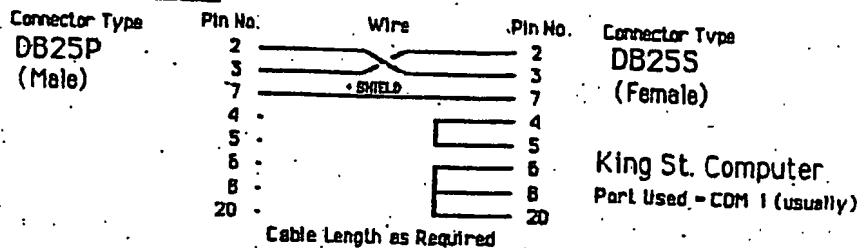
When fitting the Apple Super Serial Card it's DIP switches must be set correctly for the configuration being installed. These settings are stated in the configuration notes. For further information on DIP switch settings for the Serial Card see the specification chapter titled "Super Serial Card".

Configuration details following:-

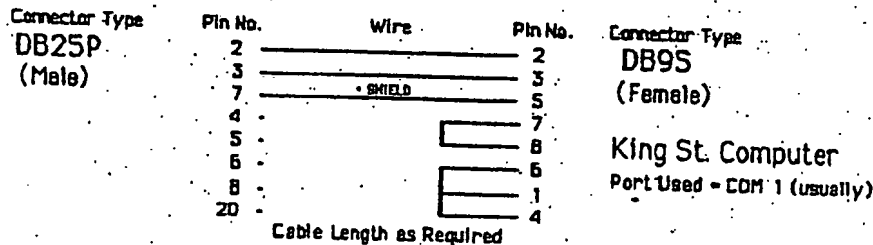
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CONFIGURATION:- APPLE to King St. Computer

Connecting Cable Details :-



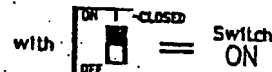
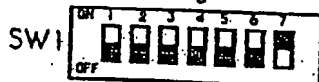
Alternate Form (for AT class machines) :-



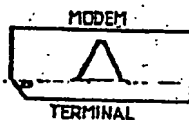
Super Serial Card Details :-

Card Mounted in SLOT 7

Switch Settings :-



Jumper Block Setting :-



Protocol Note:-
Baud Rate = 9600
Data = 8 BITS
Parity = None
Stop Bits = 1

CONFIGURATION:- APPLE to Ace Computer

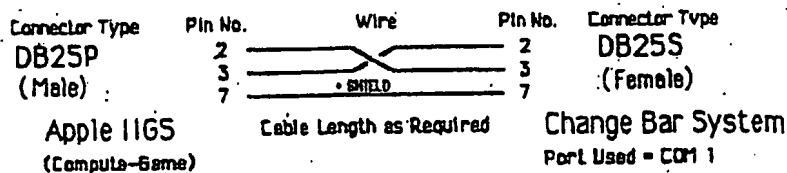
Connecting Cable and Super Serial Card details for this configuration are the same as those shown for the configuration: Apple to King St. Computer.

See :- Apple to King St. Computer.

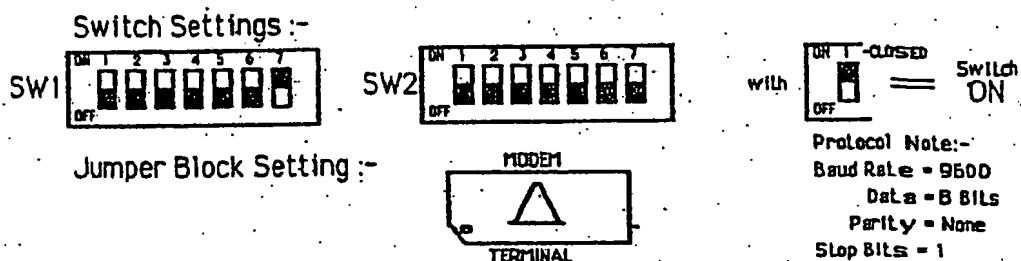
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CONFIGURATION:- APPLE to Change Bar System.

Connecting Cable Details :-

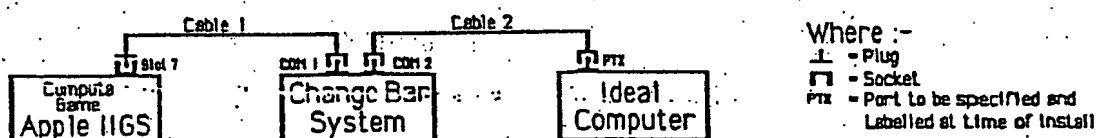


Super Serial Card Details :- Card Mounted in SLOT 7



CONFIGURATION:- APPLE to Ideal Computer

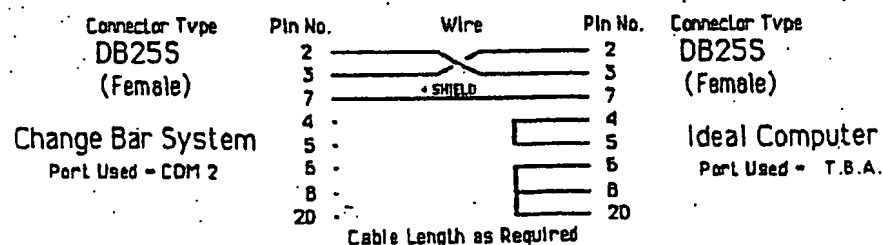
This configuration is not a direct connection, it is an extension of the Apple to Change Bar System: viz :-



Connecting Cable Details :-

Cable 1 :- (Including associated Super-Serial Card Details)
See :- Apple to Change Bar System

Cable 2 :-

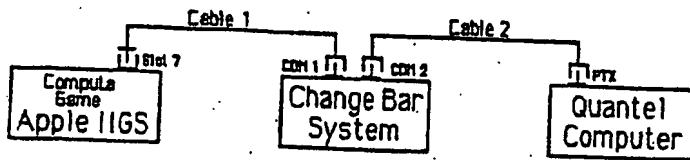


CONFIGURATION:-

APPLE to QUANTEL

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This configuration is not a direct connection, it is an extension of the Apple to Change Bar System: viz :-



Where :-

- └ = Plug
- ┐ = Socket
- PTX = Port to be specified and Labeled at time of install

Connecting Cable Details :-

Cable 1 :- (Including associated Super Serial Card Details)
See :- Apple to Change Bar System

Cable 2 :-

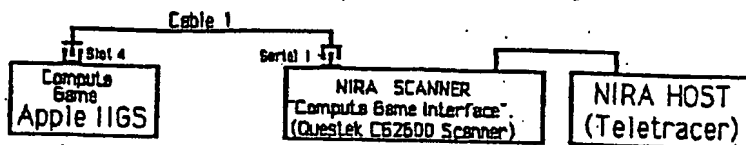
CONFIGURATION:-

APPLE to PULSE

CONFIGURATION:- APPLE to NIRA (Teletracer)

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The Apple to NIRA (Teletracer) paging system configuration is setup as follows:-



Connecting Cable Details:-

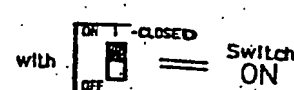
Cable 1:-

Connector Type	Pin No.	Wire	Pin No.	LABEL	Connector Type
DB25P	2		1	"R"	Screw TERMINAL BLOCK
(Male)	3		2	"OUT"	Style PLUGGABLE SOCKET
	7	SHIELD	3	"GND"	
APPLE II GS End		Cable Length as Required			To Be Found Attached to (NIRA) QUESTEK SCANNER UNIT
Port Used = SLOT 4					Port Used = SERIAL 1

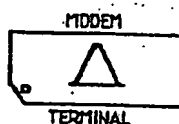
Super Serial Card Details:-

Card Mounted in SLOT 4

Switch Settings:-



Jumper Block Setting:-



Protocol Note:-
Baud Rate = 2400
Data = 8 BITS
Parity = None
Stop BITS = 2

Special Note:- For the (NIRA) Questek Scanner

1. **MAJFUNCTIONS** :- The Questek Scanner, as used in the NIRA paging system, is known to malfunction on occasions exhibiting behavior such as : continuously paging service for locations from which the source/request has been removed, missing service requests due to the overflow of service queue buffers, etc. (see also "Auto Cancel" below). - To restore normal operation, it is usually necessary to reset the Questek Scanner Unit: clearing its buffers and restarting normal service routines. The Questek Unit can be reset by either: removing power to the unit for a period of 15 -20 seconds, or removing the units' cover and pressing the RESET switch (found in the central region of the printed circuit board).

- SERIAL COMMUNICATIONS** :- For communications between the Apple II GS and the Questek unit to be effective, the port: "Serial 1" on the Questek unit must be set ON. To check this :-
 - Remove the cover of the Questek unit.
 - Visible in the lower right quadrant of the main circuit board are the display and keyboard.
 - Pressing the "*" key starts the programming mode.
 - Then press "1" to enter the "Control" section - Observe the display.
 - Using the "*" key, or as commanded by the display, : step through to "Player Tracking" and check that it is set to "1" (on), if it isn't: locate the memory write protect switch (upper centre of unit on processor board) and switch it to "write" then, using the keyboard, set player tracking to "1". The "Serial 1" port will now be enabled at the completion of this procedure.
 - Using the "*" key, step through to Auto Cancel on Transfer ("AUTCNL") -preferably set this to "1" also (this should normally be set to "1" as, if it isn't, it can be a contributing factor to continuous paging problems as mentioned above).
 - Using the "*" key, step through until the programming title screen is again displayed.
 - Press the "*" key to resume normal operation -IMPORTANT : The memory write protect switch must now be set to "Protect". At this point "Local" mode will now be displayed until the next clock increment when normal operation will be resumed.
 - Replace the cover.

For a more detailed account of these, and other, programmable options of the Questek (NIRA) Mk2 Scanner: an operating manual is available.

INFORMATION FOLLOWING

In the following pages details are provided on :-

Computa Game - Version 1 :-

	Page
• Installation Sites	3.1.1
• Poker Machine Meter Interface	3.1.2
• Poker Machine Unit and cables	3.1.6
• Power Supplies	3.1.10
• Service Notes	3.1.10

INSTALLATION SITES

Computa Game Version 1 systems were installed, in the period August 1988 to March 1989, at the following locations :-

Port Macquarie RSL Club,
Harbord Diggers Club,
North Ryde RSL Club,

These installations are identifiable by the general form illustrated in Figure 3.1.1

The variety of brands and models of poker machines, and electrical configurations of their meters and meter wiring, extant at the above installations are covered in detail in the section titled - "Poker Machines".



POKER MACHINE METER INTERFACE

The Computa Game meter interface provides an electrically isolated connection to the poker machine meters for the purpose of monitoring and recording their movements, remotely, on the Computa Game system.

METER INTERFACE MODULE - VERSION 1

The Version 1 meter interface consists of :- a meter interface board contained in a metal box, which is mounted externally to the poker machine - on the rear of the upper section.

The meter interface is connected :- to the poker machine meters via a 12 way single in line connector and wiring loom passing through a hole in the poker machine metalwork under the interface box ; and to the Computa Game poker machine unit via a DB25 connector and cable mounted on the bottom face of the interface box.

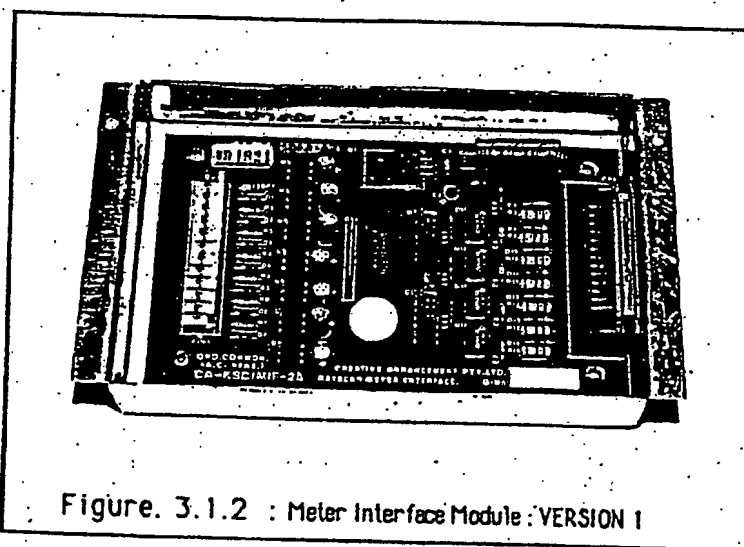


Figure. 3.1.2 : Meter Interface Module : VERSION 1

CONFIGURATIONS

The Version 1 meter interface circuit boards were manufactured and installed in three types: according to the electrical configuration of the meters of the poker machine to which they were fitted :-

Configuration :	Meter Interface Circuit Board No. :
Positive Common	CA-KSC-MIF-1
Ground Common	CA-KSC-MIF-2
A.C. Version	CA-KSC-MIF-2A

The three types of circuit board are visually identical on the component side, except for their identification numbering, and the addition of capacitors C9 to C15 on the A.C. version. A component overlay diagram is shown in Figure 3.1.3

For a more detailed description of poker machine meter configurations (Positive Common, Ground Common etc) - see section titled :- "Poker Machines Metering - Overview".

METER INTERFACE VERSION 1 - Cont'd.

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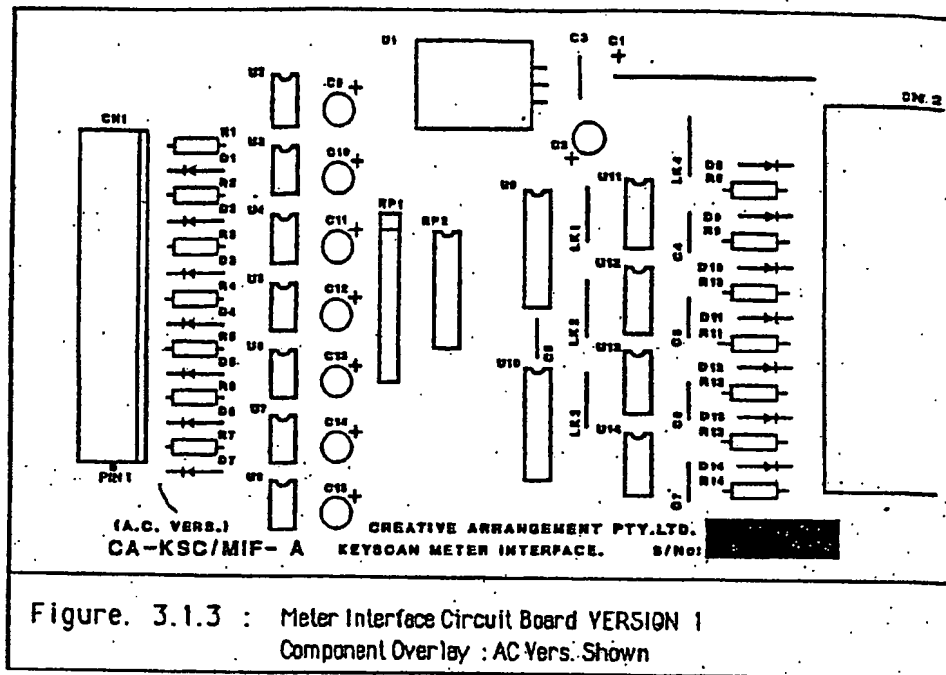


Figure 3.1.3 : Meter Interface Circuit Board VERSION 1
Component Overlay : AC Vers. Shown

INPUT

The poker machine loom (wiring loom installed by Computa Game P/L. connecting to the poker machine meter circuitry) plugs into connector CN1 :- a, single in line, 12 way, 0.156 inch pitch connector. Figure 3.1.4 shows the meter function to Pin No. designation, and includes Computa Game standard wire colours for the meter functions.

Specifications of the various poker machine looms used, at Version 1, installations, are detailed in the section titled "Poker Machines" subsection:- "Wiring Looms - Version 1".

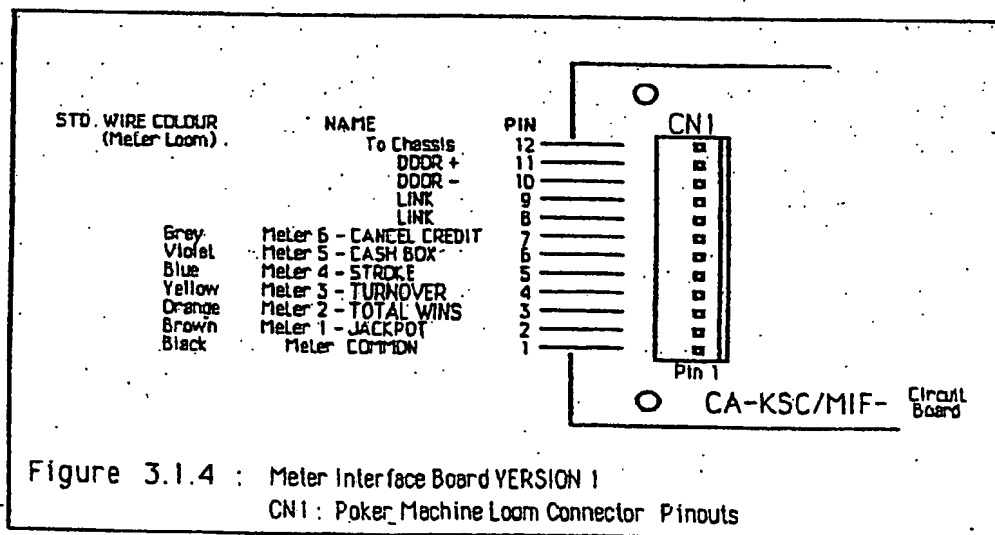


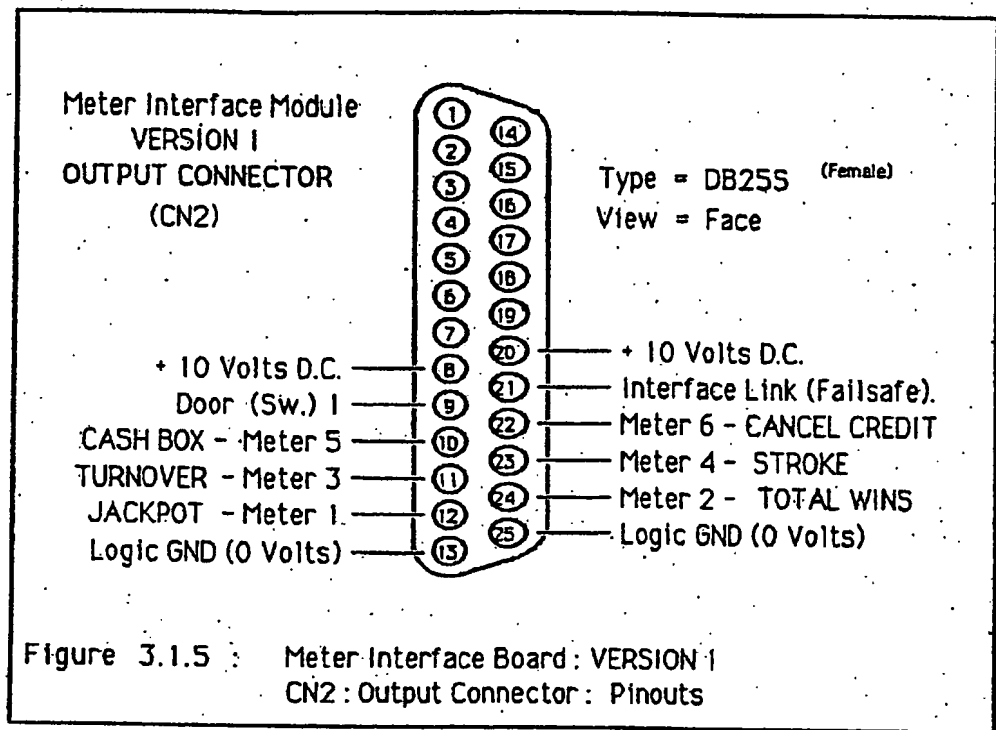
Figure 3.1.4 : Meter Interface Board VERSION 1
CN1: Poker Machine Loom Connector Pinouts

METER INTERFACE VERSION 1 - Cont'd.

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OUTPUT

The outputs from, and power connections to, the Version 1 meter interface boards are carried by CN2 :- a 25 pin "D" style female (DB25S) board mounted connector. The outputs are configured as TTL level (5 volt) active low signals. The pin No. to function designations are shown in Figure 3.1.5



METER INTERFACE VERSION 1 - Cont'd.

MODIFICATIONS :

DOOR SWITCH CIRCUIT.

The original meter interface module was designed to provide an electrically isolated connection, between a poker machine and the Compute Game processor (poker machine unit), for six meter circuits and a door switch circuit.

The door switch circuit input was designed to be powered by voltages obtainable from the wiring of the poker machine :-

The original wiring configuration (with reference to Fig. 3.1.4) :

Connector CN1 : Wired to :

- Pin 11 +24 Volts D.C. (or +12V.) derived from the poker machine.
- Pin 10 To one terminal of the Door switch.
- Pin 9 To other terminal of the Door switch.
- Pin 8 0 Volts (GND relative to +24V. above) From poker machine.

Door switch fitted by Compute Game is a Normally Open (N/O) microswitch.

However, due to the lack of availability of reliable voltage sources in some poker machines, the version 1 meter interface board was modified : such that the door switch circuit input was powered from the +5 Volt supply present on the interface board itself.

MODIFICATION DETAIL :

For the Meter interface board : (With reference to Fig. 3.1.3 and Fig. 3.1.4)

1. Change the value of R1 : remove existing 4k7 Ω resistor - replace with 1K Ω 0.25W resistor, OR : Parallel existing 4k7 Ω with 1k2 Ω 0.25W resistor.
2. Remove Pin 11 of connector CN1 : Cut pin off flush with body of connector.
3. Install Wire Link : From end of R1 - closest to CN1, to end of LK1 - closest to C1. Link on wiring side of circuit board using insulated #26 - #28 gauge wire, colour : red.
4. Install Wire Link : From Pin 8 - connector CN1, to negative (-ve) end of capacitor C1. Link on wiring side of circuit board using insulated #26 - #28 gauge wire, colour : black.

For the Meter Interface Wiring Loom :

5. Remove any wires connected to Pin 11 or Pin 8 of the meter interface connector (the mate to board connector CN1).
6. The Door switch should already be connected between Pins 9 and 10. The door switch wires should now be connected to the Normally Closed (N/C) contacts of the microswitch.

COMPUTA GAME POKER MACHINE UNIT

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The Computa Game poker machine unit consists of a microprocessor controlled module, mounted in a tall form plastic enclosure, with front panel facilities of: a 16 character x 2 line backlit alphanumeric display, backlit message annunciator, 3 push-button service switches with status indicators, and an insertion style magnetic stripe card reader.

The Computa Game poker machine unit functions as an independently addressable peripheral on the Computa Game network to which it is connected by an RS485 multidrop serial link. Communicating in a polled mode with the Apple IIOS network host computer the poker machine unit accepts downloaded parameters that determine its mode of operation and its responses, (via its display, audio transducer etc., or network upload), to stimuli such as the insertion /extraction of a card, use of the service switches on its fascia, or most importantly: any electrical activity of the Meter Interface Module to which it is connected.

COMPUTA GAME POKER MACHINE UNIT - VERSION 1

The Computa Game poker machine unit - version 1: will sometimes be heard called, or referred to as, a "Computa Game processor" or by its inception name "Keyscan 1"; in the following text the above unit will be referred to as the "CGPM-V1".

CGPM-V1 Distinguishing Features

The CGPM-V1 is easily distinguishable from any later version of the processor unit in that: the module consists of a metal chassis (suspended from the faceplate) containing, amongst other items, a bulky 6 volt SLA battery and the processor printed circuit board which is mounted vertically inside the rear face of the chassis. Externally the CGPM-V1 is distinguishable by the large plastic escutcheon on the card reader mouth, and the form of the front panel (faceplate) artwork: being a black background (reflex blue at Harbord Diggers Club), with fine line panel delineation and type in white, yellow, and red.

See Figure 3.1.6 and Figure 3.1.7

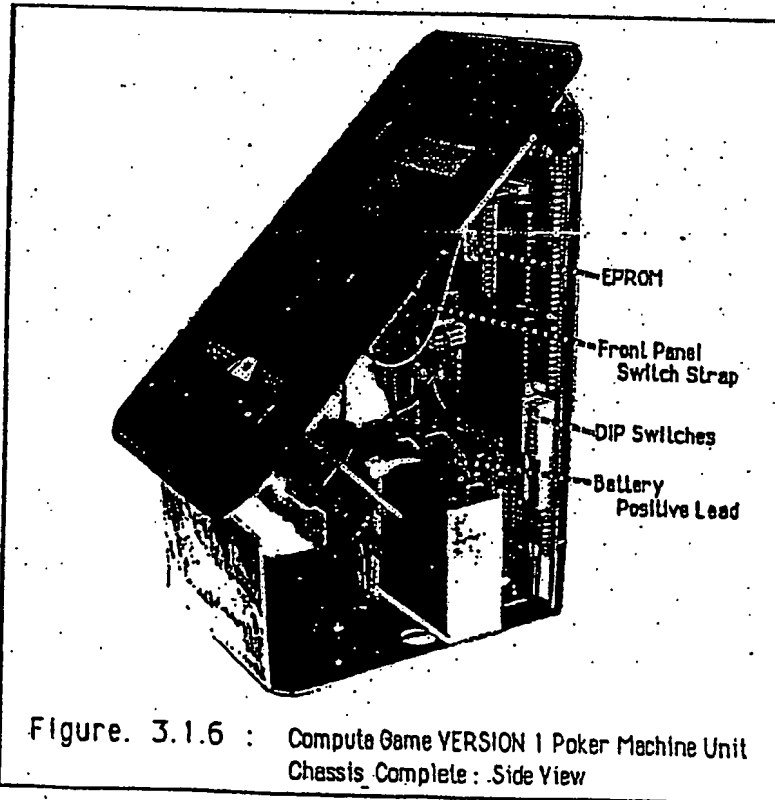


Figure. 3.1.6 : Computa Game VERSION 1 Poker Machine Unit Chassis Complete - Side View

POKER MACHINE UNIT - Cont'd

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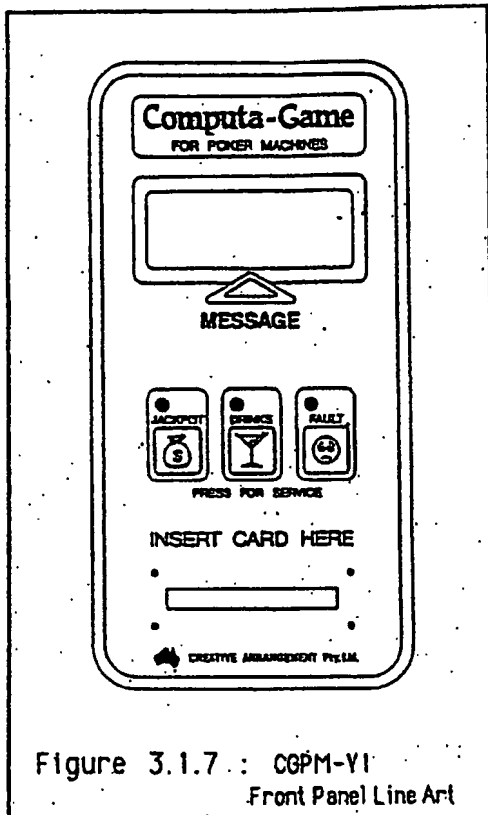


Figure 3.1.7 : CGPM-Y1
Front Panel Line Art

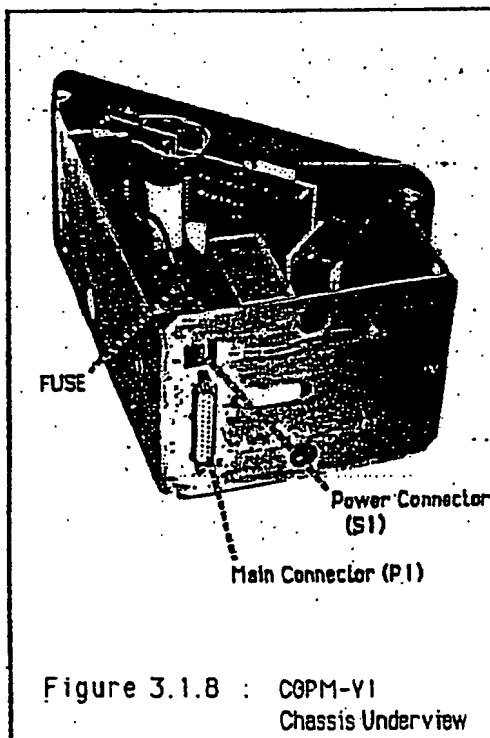


Figure 3.1.8 : CGPM-Y1
Chassis Underview

CGPM-Y1 CONNECTIONS

All connections to the CGPM-Y1 are made via two connectors protruding through the underside of the chassis metalwork, close and parallel to the rear edge. All signal circuits, including network connections, are carried on the 25 pin "D" style female connector (DB25S) noted as "P1" (on the processor board). Special Note: see Service Notes: EPROM Change: "Special Note- DB25 - P1".

Power supply to the unit (8.5 volts max. to 10 volts max. RMS A.C.) is connected via the 2 pin (0.156 inch pitch) plug noted as "S1" (on the processor board). See Figure 3.1.8

For circuit designation to pin No. specifications for the (DB25S) signal connector "P1". -

See Figure 3.1.9

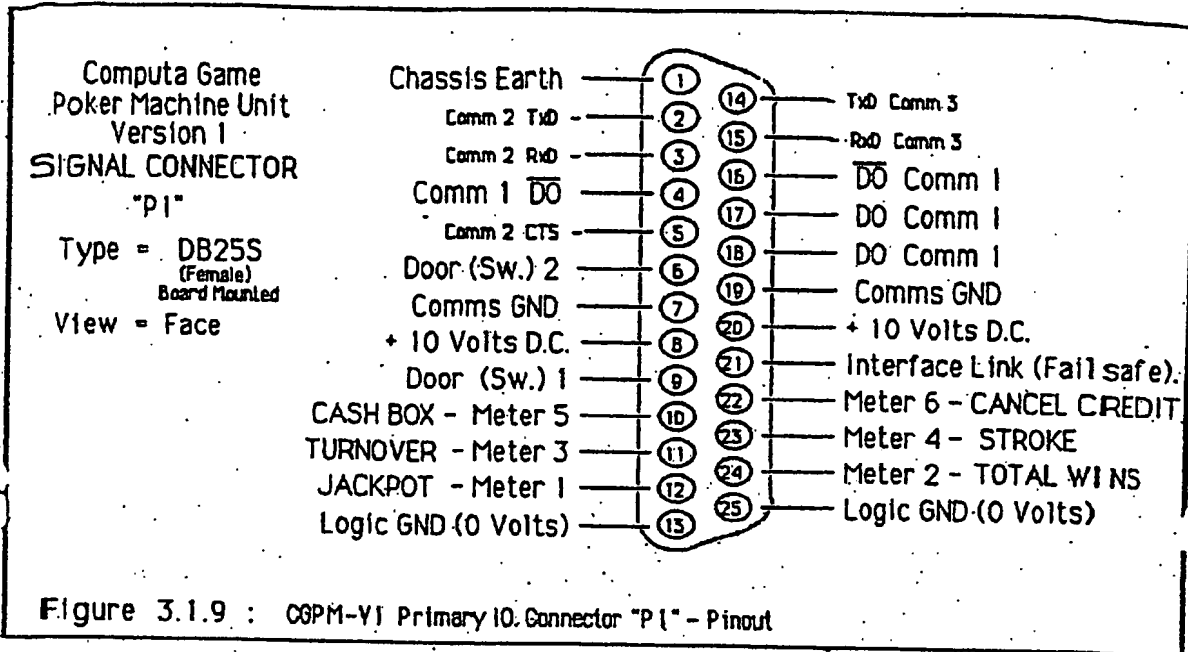
CGPM-Y1 CONNECTING CABLES

The majority of connections made to the CGPM-Y1 are between it and the meter interface module, the only other connections being network and power, hence the largest cable used is the one between the CGPM-Y1 and the meter interface and is called the "interface cable". The interface cable is composed of 3 metres of 12 core data cable with a DB25P (male), insertable pin, connector on each end - For the connection details of each end of the cable: - See Figures 3.1.5, 3.1.8 and 3.1.9. The network connections are carried on the same connector (P1), at the CGPM-Y1, as the meter interface lines, so are inserted into the CGPM-Y1 end plug, of the interface cable at installation and are very difficult to remove, without damage, without an extraction tool. Of note also is that due to the inability of the insertable connection pins used, to carry more than one wire, the network connections input to and output from the CGPM-Y1 on separate terminals. The bridge or through connection of the network is made within the CGPM-Y1 itself such that, unless other arrangements are made, an unplugged CGPM-Y1 unit will break the network at that point with respect to "downwire" units.

The power connections to CGPM-Y1 units were modified, due to a connector problem, and presently consist of a 200mm. length of "figure 8" twin core which is soldered directly to the power connector, "S1" of the CGPM-Y1 unit, at one end whilst on the other end is mounted a two way screw terminal block where the power input connection is made.

POKER MACHINE UNIT - Cont'd

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CGPM-V1 Communications Ports

The CGPM-V1 was originally designed to provide several serial communications port options as being "link and component" selectable. The primary port for network communications (RS485) is named "Comm 1"; in the vast majority of installed units this is the only port implemented (Link 1 and Link 2 on the processor board set to position "A" and driver IC U7 in place.). Two other ports could be implemented: named "Comm 2" and "Comm 3"; these are RS232, (require Link 1 and Link 2 on the processor board set to position "B", driver IC U8 installed.) and it must be noted that Comm 1 and Comm 3 are mutually exclusive.

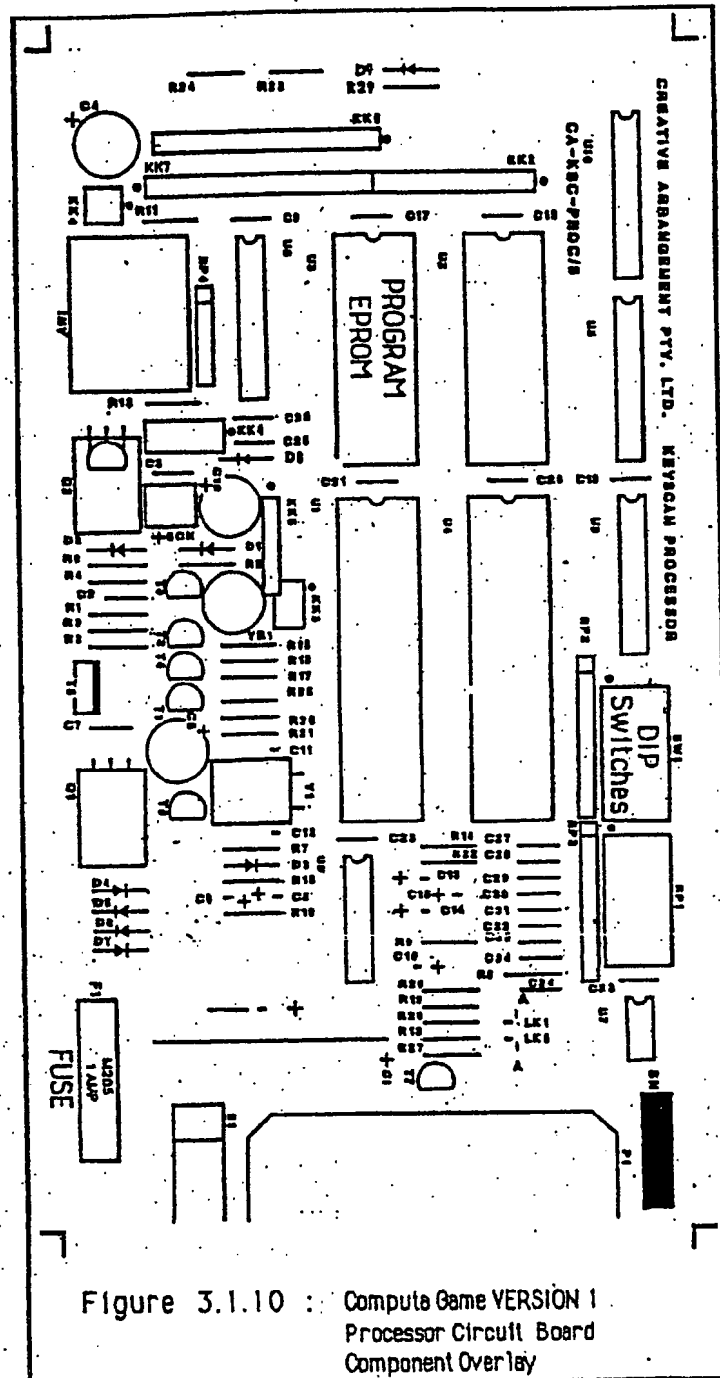
CGPM-V1 Processor Circuit Board

The CGPM-V1 processor circuit board component placement overlay is illustrated in Figure 3.1.10. Worth noting, from a service perspective, are the positions and orientation of components such as:- the power fuse (F1), the DIP switches (SW1), the program EPROM (U3), and I/O connectors for:- display module (KK6), display backlight (KK4); front panel switchboard (KK2), card reader (KK1), buzzer (KK3).

CGPM-V1 ADDRESS DIP SWITCHES

See Service Notes - this section: following.

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POWER SUPPLIES

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UNINTERRUPTABLE POWER SUPPLIES

The primary power source for all Computa Game Version 1 Installations, due to the havoc created by power transients, outages, and fluctuations, consists of a number of uninterruptable 240 volt supplies (U.P.S.'s) of the type: MAITEK LYNX 500. These U.P.S.'s power all networked devices at Version 1 installations. There are two U.P.S. at Port Macquarie RSL, three U.P.S. at Harbord Diggers Club, and two U.P.S. at North Ryde RSL.

CGPM-Y1 POWER SUPPLIES

The CGPM-Y1 units are powered by 8 Volts AC. (effectively 9 Volts in practice) derived from stepdown transformers connected to 240 volt lines supplied from the U.P.S.'s aforementioned. The stepdown transformers used are an ATCO type LV13A-2 SPO1 unit rated at 50 W, with a 15 Amp output fuse; their physical appearance is that of an aluminium tube with oblique ends, approximately 70mm. square and 260mm. long.

These stepdown transformers power up to 8 CGPM-Y1 units each but with special arrangements for the power wiring: in that no more than 4 CGPM-Y1's are powered in any one daisy chain from the transformer due to voltage drop. Where longer daisy chains could not possibly be avoided an additional "step-up" autotransformer was used: of the type ATCO ECTMA 90-8/9V, and physical form of a white open frame transformer similar to a fluorescent lighting ballast, this was fitted where needed - generally next to or on the original stepdown transformer and connected to the secondary (8 V. AC.) of that transformer with the CGPM-Y1 units being powered from the output of the autotransformer.

SERVICE NOTES

CGPM-Y1 DIP SWITCHES

On the processor board of the CGPM-Y1 module there is a DIP switch package containing 8 switches: figure 3.1.6 shows the position of the DIP switch package, refer also to Fig. 3.1.10 - component "SW1".

The setting of these DIP switches determines the network address of the individual CGPM-Y1 module. The network address for each individual module must be unique: in that should two modules share the same address, during communications, network contentions will arise - with serious consequences for network integrity.

The switches are set using a binary code (number), which equates to the decimal value of the network address required, in the range 1 to 254. For address settings of DIP switches: see section "Poker Machine Units - Address DIP. Switches", alternately the 8 bit binary equivalent of the decimal address (modulo 256) can be calculated and the switches set: where Sw.1 = LSB. and Sw.8 = MSB. and switch closed = "0", this being the hard way to do things.

Illegal settings of the Dip switches (either all switches 'on', or all switches 'off'), on the CGPM-Y1, have no service/installation function and drastic consequences. If all switches are set 'off' the CGPM-Y1 will enter the "Power Down" mode and cease to function on the network - to reinstate normal operation requires a complete reset of the unit entailing: - Disconnect in sequence: DB25 communications connector (P1), Fuse (F1), Positive battery lead. Then reconnect in sequence: Fuse (F1), DB25 connector, Positive battery lead. The effects of all switches set 'on' are unknown, but primarily: Illegal settings of the DIP switches on the CGPM-Y1 are to be avoided at all times.

SERVICE NOTES - Cont'd.

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CGPM-V1 CARD READER

The card reader on the CGPM-V1 is a Neuron model MCR-191-1R which has a common fault in that card entry/exit is detected by a cam operated microswitch: which will sometimes fail to close, on withdrawal of a card. Whilst the consequences of this fault are not serious electrically, considerable annoyance is generated in the players because Computa Game points are only updated on the network at the detected withdrawal of a players card.

The fault can be remedied initially by the rapid insertion/withdrawal of a card into the faulty reader - freeing up the cam/switch. However should the unit show a history of this fault - it is necessary to modify the position of the cam in the reader: using a sturdy pair of long nose pliers grip the metal tab supporting the grey plastic cam - between the front mounting plate and the cam pivot screw, and bend it slightly (in the vertical plane) towards the card face, then test the operation of the switch with a card (with particular attention to switch closure on card exit), repeat the operation if necessary until satisfactory operation is attained.

MAINTENANCE / SUPERVISOR / STAFF CARD USE

Computa Game processor units allow, through the use of a specially encoded card, meter readings held in battery backed memory to be read and if necessary altered, and interface switching delays (relevant to the reliability of meter readings) to be set. The specially encoded cards are produced in three types, according to their issue and use, being called a "maintenance", "supervisor", or "staff" card. The basic differences between the classes of card being that: a "supervisor" or "staff" card is operable only on equipment installed at the venue for which it is issued and concurrent with this requires the Computa Game network to be "running" to allow its use, whereas the "maintenance" class of card is operable on Computa Game equipment at any venue and does not require a "running" network. The "maintenance" class of card is only held by Computa Game P/L. staff.

There are some minor differences in the operation of CGPM-V1 maintenance card use, described below, but otherwise operation is the same as later versions:- for full explanation See section "POKER MACHINE UNITS - MAINTENANCE CARD USE".

The differences when using a maintenance card on a CGPM-V1 unit are that when the card is inserted: in a unit that has had parameters loaded (ie. the network has been run since the last power down or reset) the top line of the first display screen will read "SUPERVISOR" - not "MAINTENANCE", and on units that are displaying "Computa Game Inactive." (ie. those that have no parameters loaded) the first display screen will be skipped entirely with operation commencing at the "METER SETUP" screen.

SERVICE NOTES - Continued Over ...

SERVICE NOTES - Cont'd.

HOW TO CHANGE AN E.P.R.O.M.

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The acronym "EPROM" is industry parlance for - Erasable Programmable Read Only Memory and takes the form of an integrated circuit chip characterised by a quartz window in its upper surface; this quartz window is usually covered (by an identifying label), to prevent the admission of ultraviolet light and the consequent unintentional erasure of the information stored in the memory. The EPROM used in the CGPM-V1 is a 27C256 : a 256 Kbit chip in a 28 Pin dual in line package, and provides the primary program memory for the microprocessor i.e. determines the basic mode(s) of operation of the CGPM-V1 unit. The program stored in EPROM, sometimes including the EPROM it is stored on, is often heard referred to, in the electronic industry, as "firmware".

Whenever Compute Game system features are upgraded, particularly with regard to the operation of the CGPM units, these changes are usually in the form of revisions to the system software and firmware : which entails a change of EPROM for the CGPM units in question.

To change an EPROM in a CGPM-V1 unit requires care and a deal of caution, first you must kneel and face Mecca ...

Tools required : (a) A small (less than 100mm. OA. length) flat bladed-screwdriver or a flat 70mm x 10mm x 1mm blade stepped at half its length, or (b) a large sized pair of long nose pliers with angled nose and fine point.

IMPORTANT NOTICE : STATIC CONTROL

The following procedure involves the handling of static sensitive components; as clubs are apt to use nylon carpets etc. the problem of static electricity should not be underestimated; it is therefore mandatory to ensure the discharge of any static buildup on your person prior to handling said components.

Although the usual production method for static dissipation involves the use of wrist straps and ground leads this proves to cumbersome for normal service procedure, an effective method to discharge static is to touch some properly grounded metalwork (eg. the frame of a poker machine) after any major movement (particularly walking around or shuffling feet) and immediately prior to handling any static sensitive components : Denoted in the following text by symbol : SS.

Procedure :**NOTE :-**

- Before proceeding it is wise to use a Maintenance class card to check and note the current interface setting (mSec.) as this will need to be re-entered at the end of this procedure.
- The following procedure description presumes EPROM changes are being performed to a limited number of units with their power supplies active. Where all unit EPROMs are being changed in an installation the usual procedure is to power down the entire installation at source : in which case the connection sequence described in points 1. and 4. is not strict except for the battery connection which must be the last disconnection in powerdown and the last reconnection after powerup :- presuming the sequence is (a) installation powerdown, (b) disconnections made, work performed, and reconnections made; (c) installation powerup, and then (c) batteries reconnected, (d) network recommissioned.

In conjunction with the following : See Fig. 3.1.6 and Fig. 3.1.10

1. Disconnect the CGPM-V1 unit totally from power using the following sequence :
 - (a) Disconnect the DB25 communications connector by using a screwdriver gently, between the connector and the chassis metalwork, so that the wiring is disturbed as little as possible.
 - (b) Remove power fuse "F1".
 - (c) Disconnect the positive battery lead - red wire : spade terminal at positive terminal of battery.

SERVICE NOTES: - HOW TO CHANGE AN EPROM - Cont'd.

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2. Remove the existing program EPROM (SS) in the following manner :-

- ♦ The program EPROM is in position U3 on the processor board (see Fig. 3.1.10) recognisable as the top left chip in the group of four large chips on the board, also that it is usually the only socketed chip.
- ♦ The primary objective in this operation is to remove the EPROM without undue stress to the board or component and without bending the legs of the EPROM itself. It is usual during this operation to place the CPU module on its back on a flat surface (Not on its base: See "Special Note - DB 25 - P1" at the end of this procedure description) and use your free hand to steady the unit by holding the front panel whilst also holding the switchboard connecting strap out of the way against the front panel such that it is not dislodged from connector KK2 and clear access can be gained to the EPROM.
- To remove the EPROM (SS): Two methods will be described :-
 - (a) Screwdriver method: Working from the DIP switch side of the chassis, slide the blade of a small flat bladed screwdriver (or blade tool - described above) under the centre of the bottom edge of the EPROM chip: between the chip and the socket; aligning the screwdriver as closely as possible with the board and EPROM orientation; and with a gentle rocking (twisting) motion, insert the screwdriver under the EPROM chip as it is prised out of the socket, the rocking motion of the tool is to ensure the pins on either side of the chip are prised from the socket at the same rate. When the chip is almost out of the socket: withdraw the screwdriver and apply a little gentle finger pressure to the heel (bottom) of the chip - this will cause the chip to see-saw in the socket releasing its top pins; use the screwdriver again gently to free the chip in the socket - without causing it to fall out. Now by gripping the chip by the body ends (between the thumb and forefinger) withdraw it from the module and place it in conductive foam or an antistatic storage tube.
 - (b) Pliers method: The use of a large pair of long nose pliers, with angled jaws and fine point, is preferred by some servicepeople as a more efficient way of extracting the EPROM, the angled jaws allowing grip and control outside the confines of the module metalwork. However care must be exercised using this method as the compressive pressure and tensile stresses applied to the body of the EPROM during the process must be minimised: due to the risk of fracture of the bonding and hermetic seal of the EPROM body package, and risk of damage to the microprocessor chip body which becomes a defect leverage point on the board.
 - The extraction method is similar to the screwdriver method in that one tip of the jaws of the pliers is inserted under the centre bottom edge of the EPROM body, between the body and the socket, and a light leverage applied to raise the chip out of its socket until the plier jaw can be slid in further and the process repeated until the chip body is able to be gripped for three quarters of its length by the plier jaws. Now the EPROM body is gripped gently but firmly in the plier jaws and the pliers gently twisted so that the EPROM is lifted (vertically) out of its socket. The EPROM is then stored in conductive foam or an antistatic tube package.

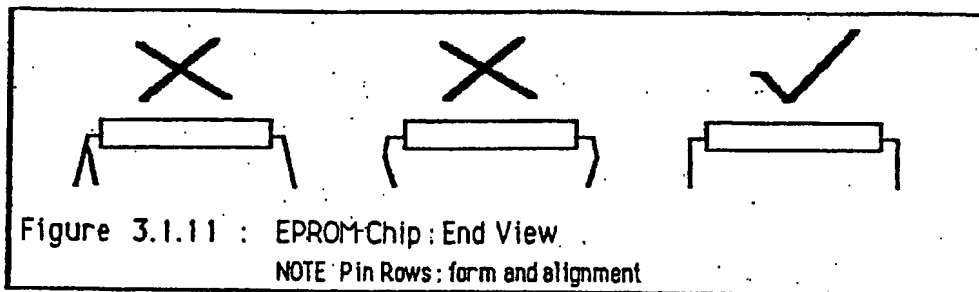
3. Insert the new program EPROM (SS):

- Withdraw the new EPROM from its packaging, handling it by the body ends only, and sight each of the two rows of pins from the end of the chip: each row of pins should be fully aligned and square to the body of the chip: See Figure 3.1.11. This is necessary as the chip is to be hand inserted and must align precisely with the socket. If any individual pin is bent out of alignment use a small pair of pliers to straighten and align it with the others. Commonly both rows of pins are not square to the body of the chip, as this is the way they are supplied from the manufacturer, to modify the bend in the pins so that they are square: hold the chip with both hands using a thumb and forefinger grip at each end of the chip body, place the face of one row of pins flat against a flat hard surface (the chip body will now be resting slightly off the vertical from this surface). Now gripping the chip firmly, with a firm but gentle pressure against the surface/pin faces: roll the chip body into a vertical position. Now sight the row of pins for square and repeat the process if necessary. Take care not to overbend the row of pins as the above process is easy to repeat but retrieving an overbent row is difficult. Repeat the process for the other row.

Remove the existing program EPROM (SS) in the following manner :-

SERVICE NOTES - HOW TO CHANGE AN EPROM - Continued ...

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Point: 3. Cont'd. ...

- ◊ The object of this process is to modify the existing bend in the pins (close to the chip body) leaving the pin faces flat, - If the pin faces are bowed to produce the result: chip/socket alignment will not be true, the pins will be weakened, and bent pins during insertion will result = big trouble.
- ◊ Note the indent or notch, central on one end of the body, of the EPROM: this denotes the position of pin 1 on the device and therefore determines the orientation of the device when it is inserted in its socket.
- ◊ The correct orientation for the EPROM in the CGPM-V1 is: notch to the top (closest to the connector KK2), See Fig. 3.1.10.

- To insert the EPROM (SS): Handling the EPROM by the ends only, place it onto the socket (U3 on the CGPM-V1 board) and visually check that all the pins (on both sides of the device) are in alignment with the socket(s), if not - withdraw the device and correct any misalignment.

If all the pins are aligned then using even finger pressure centrally on the body of the device press it into the socket, for a good insertion: - an initial resistance will be felt followed by an even drag then a firm bottoming.

Now visually check all pins of the device to ensure that none are bent out of the socket or under the chip: if any pins are bent the chip must be removed and the pin(s) straightened before reinsertion. Warning: pins will break off if bent extremely or more than two or three times, rendering the device useless.

4. Reconnect the CGPM-V1 unit to power in the following sequence only:-

(a) Replace power fuse (F1).

(b) Reconnect the DB25 communications connector.

Important:- See "Special Note - DB25 - P1" at the end of this procedure description.

(c) Reconnect the battery positive lead, and check the negative lead.

5. The CGPM-V1 unit should now display "Compute Game Inactive":

If it doesn't then check:-

- i. The items in point 4. are correctly connected and the "figure 8" power cable has not become disconnected at either "S1" or the terminal block.
- ii. The EPROM is correctly oriented and socketed i.e. no pins bent or hanging over, out, or under. - If the EPROM has been incorrectly inserted, either by orientation or misalignment, there is a very high likelihood it will have been destroyed and should be replaced.
- iii. Disconnect the power to the unit using the sequence stated in point 1., whilst the power fuse is out check it for continuity with an ohmmeter, then reconnect the power: observing strictly the sequence stated in point 4.
- iv. That neither of the connector straps between the circuit board and the front panel has become dislodged from their respective board socket connectors - particularly the display strap (the larger one into connector KK6). NB: The switchboard strap is a 9 circuit strap - which plugs into connector KK2 (a 10 circuit connector) positions 1 to 9. Position 1 is marked on the board by a spot (near connector No. marking).

SERVICE NOTES - HOW TO CHANGE AN EPROM - Continued ...

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Point 5. Cont'd ...

- v. Check the address DIP switches to ensure they are not set to one of the illegal states
- see service notes : CGPM-VI DIP switches.
- vi. If at this point the unit still isn't working : there is a chance that the EPROM is defective :
- replace the EPROM with a fresh unit using the complete preceding procedure with particular attention to "Static Control" - see preceding notice.
- vii. Now if you have proceeded this far without results it's probably about time to kneel and face Mecca again, but that aside - the presumption is that the unit was working before the EPROM change so something occurred, during the procedure, resulting in the present inactivity.
If the cause cannot be isolated then the complete CGPM-VI unit will need to be replaced and the faulty unit returned to Computa Game Ltd. (with a fault description) for service.

6. Run a "Test Poll" on the network :

Running a Test Poll is the only effective way to determine the particular state of activity of any CGPM unit on the network. The information is provided relative to the network address of the unit in question and for this procedure three results are possible :-

- (a) "Memory Erased" means everything is as it should be - go to point 7.
- (b) "Error" means the unit is responding to the poll but its response is unintelligible :
 - i. This may indicate address contention (two units responding to the same address call) so check the unit's address DIP switches to ensure they are correctly set for its unique address, also check the DIP switches on any other unit that has been worked on and is showing an "Error" or "Not Answering" result in the same Poll.
- For switch settings : see section - "Poker Machine Units - Address DIP Switches".
 - ii. If the above checks show no faults then : Reset the unit by using a powerdown/powerup as per the sequence described in points 1. and 4. , then run another Test Poll.
 - iii. If the test poll result is still "Error" (particular to that unit - see below) then replace the unit and return it to Computa Game Ltd. (with a fault description) for service.
 - o NB: If there is a profusion of "Error"s then the most likely cause is a short in the network wiring and this must be traced by deductive removal of network branches/units until the wiring fault is found and repaired.
- (c) "Not Answering" means there was no response from the unit when it was polled, so :
 - i. Check the unit's DB25 communications connector to ensure it is properly sealed and that there are no broken or loose wires. - See also "Special Note - DB25 - P1" at end of this description.
- In CGPM-VI installations the network connections are "through connected" inside each CGPM-VI unit so a fault of this type will usually manifest as a number of "Not Answering"s, being those units "downwire" of the fault (open circuit) as well as (probably) the faulty unit itself.
See previous description this section - "CGPM-VI Connecting Cables".
 - ii. Check the unit's address DIP switches to ensure they are correctly set - see point 6 (b) above.
 - iii. If the above checks show no faults, then : Reset the unit by performing a powerdown/powerup using the sequences described in points 1. and 4. .
 - iv. Run another Test Poll and revert to beginning of point 6, if however this loop has been run a number of times already with no success then replace the faulty unit and return it to Computa Game Ltd. (with a fault description) for service.

- 7. Turn off (NB: * NOT deselect) the network printer, then Start the network.
Run the network for 5 to 10 minutes, then Stop the network.

NB: * The printer is not required during this service procedure so to save paper etc. It is turned off.
If the printer is not turned off but "deselected" then the network restart will "hang" until the printer is "selected" again or turned off.

cont'd - over ...

SERVICE NOTES - HOW TO CHANGE AN EPROM - Cont'd.

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8. Run a Test Poll :

- (a) At this stage the CGPM-V1 units in question should be responding to the test poll with "Invalid Meters" - this being the case then : Start the network, and proceed to point 9.
- (b) Any other result then revert to point 6.

9. Re-enter the recorded meter values and meter interface setting : -

Due to the circuit configuration of CGPM-V1 units, and the full power down required during the EPROM replacement procedure, the recorded meter values and the meter interface setting were lost and must now be re-entered using a "maintenance class" card. For a full description of the use of a maintenance class card :- see section "Poker Machine Units - Maintenance Card Use".

10. Stop the network and run a Test Poll :-

- (a) All units should now respond to the Test Poll with "Ready" : - If so then proceed to point 11.
- (b) If the response was "Invalid Meters" : then -
 - i. If this is the first time this point has been reached :- revert to point 9.
 - ii. If this is the second time this point has been reached :- revert to point 6 iii.
 - iii. If this is the third time this point has been reached :- then replace the unit and return it to Computa Game Ltd. (with a fault description) for service.

11. Start the network, and congratulations.

Special Note - DB25 - P1

On some CGPM-V1 units the board mounted female DB25 connector "P1" has a completely plastic body : in most cases the manufacturer of these units has omitted to fasten the body of this connector either to the chassis or to the printed circuit board such that the stresses of connection/disconnection are borne by the 25 socket tails where they are soldered to the circuit board. The socket tails on these plastic body connectors are inclined to be brittle and have been known to fracture. Therefore :-

- i. Avoid excessive force when connecting or disconnecting this type of connector.
- ii. When these units are sitting on their base : they are sitting on this connector and should not be subjected to shock, vibration, or downward pressure whilst in this position.
- iii. If fractures (described above) can be visually sighted or determined by ohmmeter testing, particularly as the cause of a problem in the preceding procedure, then the faulty CGPM-V1 unit must be returned (with a fault description) to Computa Game Ltd. for service.

END Service Notes.

SECTION 3.2 : POKER MACHINE UNITS : VERSION 2

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• -(including Std. re-commission procedure).	

List of Figures.

- Figure 3.2.1 Shows the general form of poker machine units at Version 2 installations.
- Figure 3.2.2 Shows the Version 2 meter interface board as it is normally mounted and connected.
- Figure 3.2.3 Shows the component overlay diagram for the version 2 meter interface board.
- Figure 3.2.4 Shows the Version 2 meter interface board input connector J4 : poker machine meter function to Pin No. designation and door switch connections.
- Figure 3.2.5 Shows the pin No. to function designations for the meter interface output connector J1.
- Figure 3.2.6 Shows the CGPM-V2 front panel line art.
- Figure 3.2.7 Shows a rear view of the CGPM-V2 chassis complete : depicting the positions of various important components.
- Figure 3.2.8 Shows the CGPM-V2 processor board meter interface connector J1: pin assignments and orientation.
- Figure 3.2.9 Shows the CGPM-V2 processor board power/comms connector J6: terminal assignments, orientation, and 'control' cable configuration.
- Figure 3.2.10 Shows the pin assignments for the card reader connector : J2 on the CGPM-V2 processor board.
- Figure 3.2.11 Shows the pin assignments for the front panel switch strap connector : J3 on the CGPM-V2 processor board.
- Figure 3.2.12 Shows the CGPM-V2 processor circuit board component placement overlay.
- Figure 3.2.13 Shows a version 2 Mk.2 power supply distribution board including termination configurations for "control" (Mk.1 & Mk.2) and network cables.
- Figure 3.2.14 Shows the standard formation of the meters in a "Microstar 1" poker machine.
- Figure 3.2.15 Shows a detail of the meter interface board wiring side modifications necessary for interposed Jackpot/Stroke meters.
- Figure 3.2.16 Shows correct form and alignment of (EPROM) device pins for a hand inserted chip.

INSTALLATION SITES

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Compute Game Version 2 systems were installed, in the period February 1990 to July 1990, at the following locations :-

Fivedock RSL Club,
Richmond Ex-Servicemens Club,
Barham United Ex-Servicemens Club,
Ettalong Beach Memorial Club,
Lidcombe Catholic Club,
Mingara Community Club,
Broken Hill Ex-Servicemens Club,
Rooty Hill RSL Club.

Figure 3.2.1 shows the general form of poker machine units at Version 2 Installations.

The variety of brands and models of poker machines, and electrical configurations of their meters and meter wiring, extant at the above installations are covered in detail in the section titled - "Poker Machines".

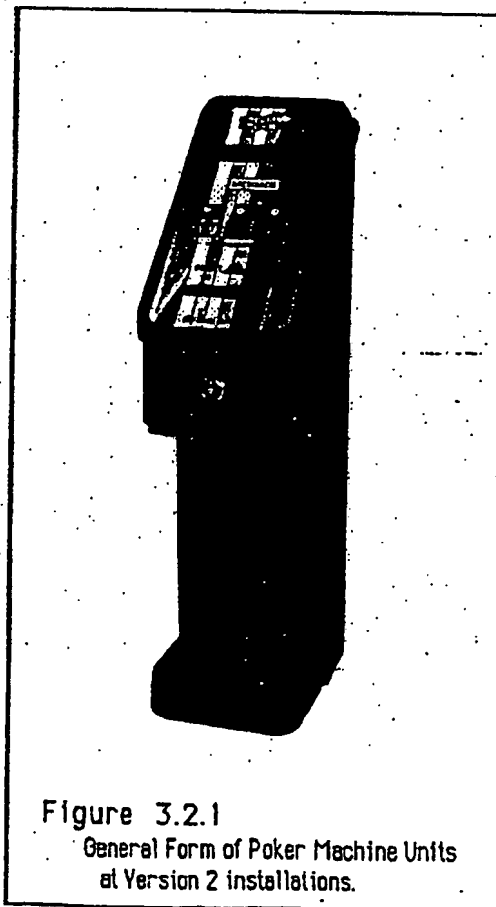


Figure 3.2.1
General Form of Poker Machine Units
at Version 2 Installations.

POKER MACHINE METER INTERFACE

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The Compute Game meter interface provides an electrically isolated connection to the poker machine meters, and a door switch circuit, for the purpose of monitoring and recording their movements, remotely, on the Compute Game system.

METER INTERFACE MODULE - VERSION 2

The Version 2 meter interface consists of: - a meter interface circuit board approximately 85mm. square, and associated connecting wiring looms, which are mounted internally in the poker machine. For the majority of poker machines the meter interface board is placed in the light box (the upper section metal case) on the rear panel. However some of the newer poker machines, in particular the new Ainsworth one and two dollar machines, by their physical construction preclude the former mounting position :- in these machines the meter interface board is placed, in the lower section of the machine, on the rear panel behind the change hopper. For more information on meter interface placement and wiring see section titled "Poker Machines": subsection: specific to the poker machine model in question.

Figure. 3.2.2 shows the version 2 meter interface board as it is normally mounted and connected. The normal mounting method for the meter interface boards at the aforementioned installations consists of two strips of double sided adhesive foam tape which fasten the board to the rear panel of the poker machine.

Figure. 3.2.3 shows the component overlay diagram for the version 2 meter interface board; note the placement and orientation of connectors J1 and J4.

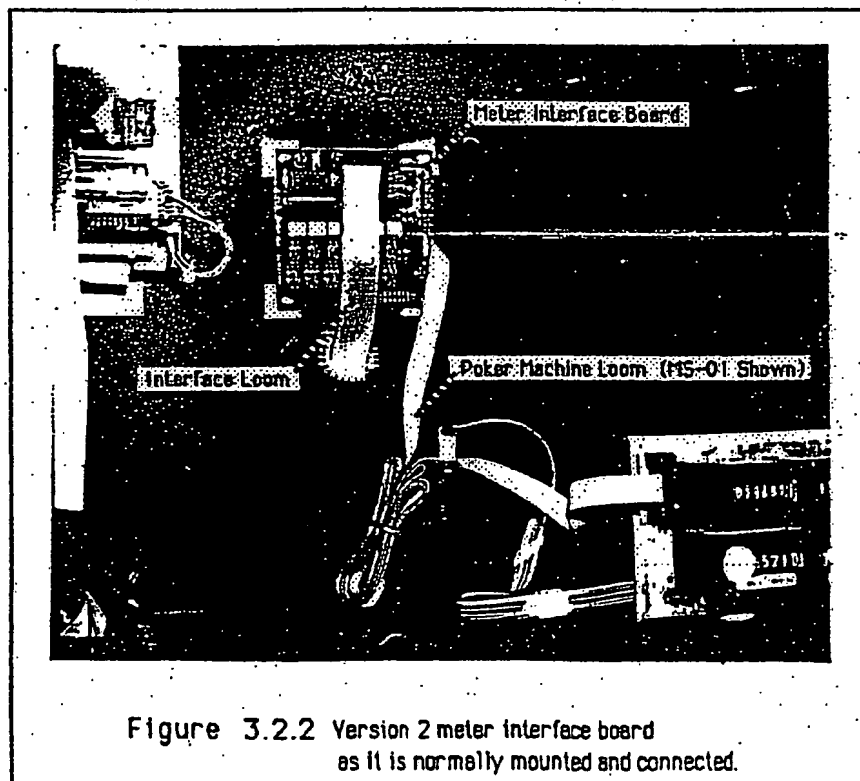


Figure 3.2.2 Version 2 meter interface board as it is normally mounted and connected.

Meter Interface Module - Version 2.: Continued:

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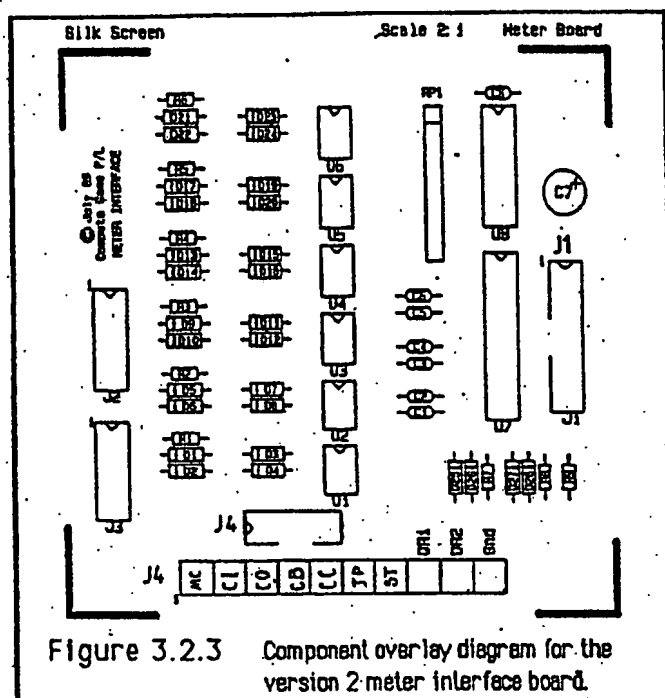


Figure 3.2.3 Component overlay diagram for the version 2 meter interface board.

INPUT

Input to the meter interface board (from the "poker machine loom" installed by Computa Game Ltd. connecting to the poker machine meter circuitry) is via connector J4 :- there are two options for this connection: the original placement was for a 10 way (0.2 inch pitch) screw terminal block (terminals 8, 9, and 10 of which are currently used for the door switch connections), the second option, which has become the defacto standard for the poker machine meter connections, is a 10 way (0.1 inch pitch) dual row header connector.

Figure 3.2.4 shows the version 2 meter interface board input connector J4: poker machine meter function to Pin No. designation, and door switch connections, and includes Computa Game standard wire colours for the meter functions.

Some poker machines, in particular some Microstar 1's and all Microstar 2's, have their Jackpot and Stroke meters interchanged: requiring modification of the meter interface circuit board :- See this section: "Service Notes" - "Meter Interface Jackpot/Stroke Modification".

Specifications of the various poker machine looms used, at Version 2, installations, are detailed in the section titled "Poker Machines" subsection:- "Wiring Looms - Version 2".

OUTPUT

The outputs from, and power connections to, the Version 2 meter interface boards are made via connector J1 :- a 16 way (0.1 inch pitch) dual row header connector. The outputs are configured as TTL level (5 volt) active low signals.

Figure 3.2.5 shows the circuit allocations for the meter interface output connector J1.

The meter interface board output is connected to its associated Computa Game poker machine unit by a 16 way dual row IDC connector and ribbon cable (called the "Interface loom") passing out of the poker machine through a one inch hole in the rear panel metalwork in close proximity to the meter interface board placement.

Meter Interface Module - Version 2.: Continued:

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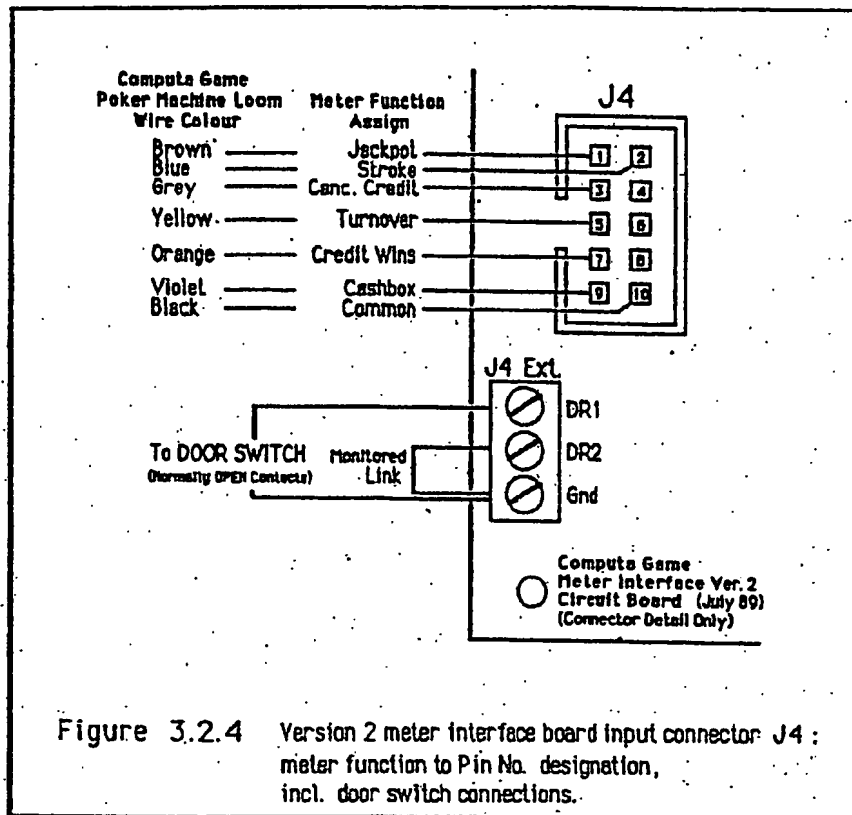
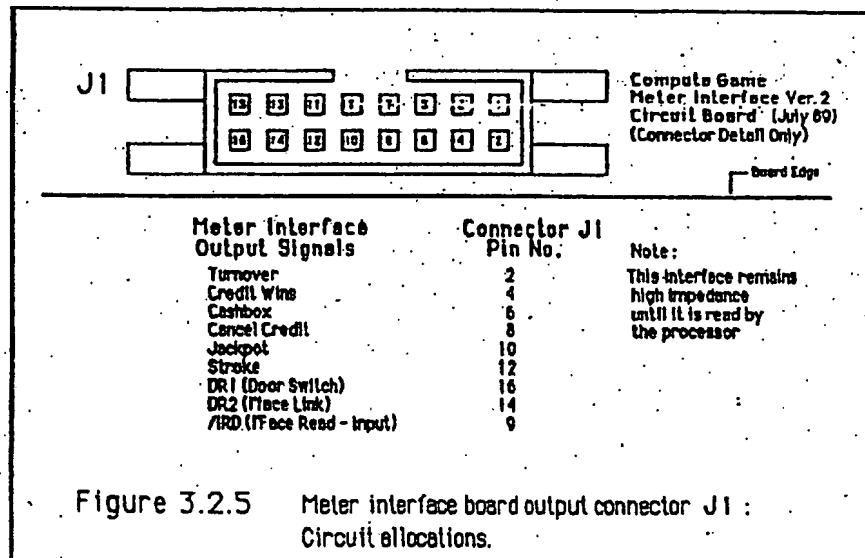


Figure 3.2.4 Version 2 meter interface board input connector J4 : meter function to Pin No. designation, incl. door switch connections.



COMPUTA GAME POKER MACHINE UNIT

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The Computa Game poker machine unit consists of a microprocessor controlled module, mounted in a tall form plastic enclosure, with front panel facilities of: a 16 character x 2 line backlit alphanumeric display, backlit message annunciator, 3 push-button service switches with status indicators, and an insertion style magnetic stripe card reader.

The Computa Game poker machine unit functions as an independently addressable peripheral on the Computa Game network to which it is connected by an RS485 multidrop serial link. Communicating in a polled mode with the Apple IIOS network host computer the poker machine unit accepts downloaded parameters that determine its mode of operation and its responses, (via its display, audio transducer etc., or network upload), to stimuli such as the insertion /extraction of a card, use of the service switches on its fascia, or most importantly: any electrical activity of the Meter Interface Module to which it is connected.

COMPUTA GAME POKER MACHINE UNIT - Version 2

The Computa Game poker machine unit - Version 2: will sometimes be heard called, or referred to as, a "Computa Game processor" or by its inception name "Keyscan 2".

In the following text the above unit will be referred to as the "CGPM-V2".

CGPM-V2
Distinguishing
Features

Whilst CGPM-V2 installations use the same tall form rotationally moulded plastic enclosures as version 1, the CGPM-V2 is easily distinguishable in that :-

(a) externally: the front panel is vertically striped in rainbow colours bordered by silver and black, the card reader entry slot is almost flush with the front panel, and there is a keylock on the front of the plastic enclosure just below the front panel.

(b) internally: all circuit boards, card reader module, etc. are suspended from the front panel with no other enclosing metalwork.

Figure 3.2.6 shows the CGPM-V2 front panel line art

Figure 3.2.7 shows a rear view of the CGPM-V2 chassis complete: depicting the positions of various important components such as the:- program memory (EPROM) socket, address DIP switches, reset switch, power/comms connector, meter interface connector, etc.

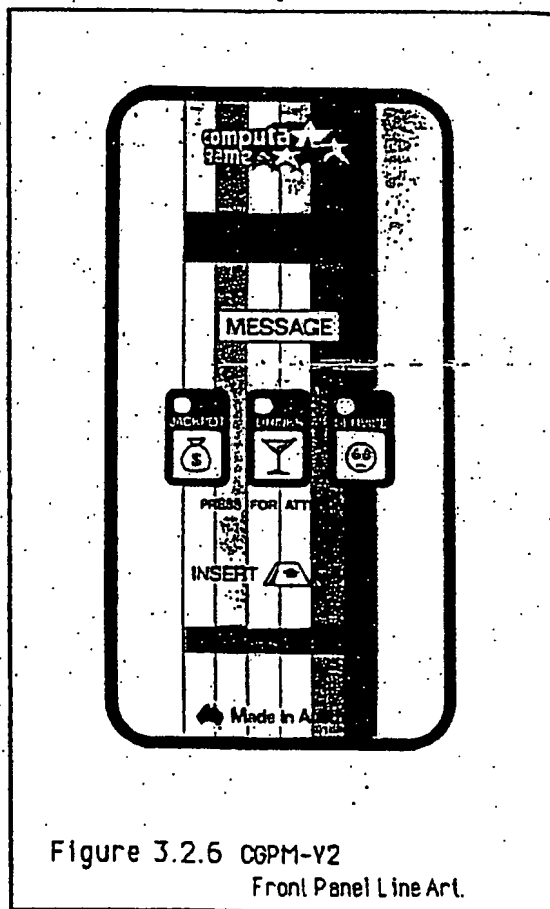
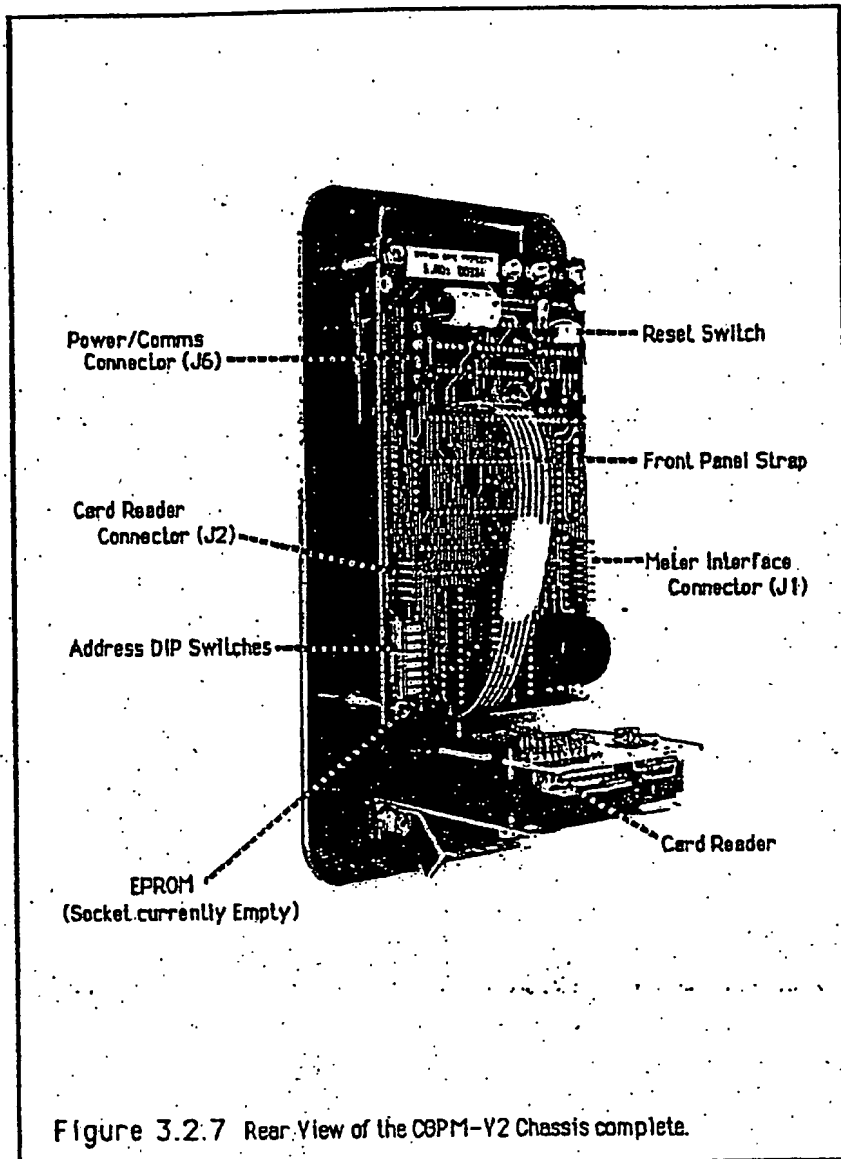


Figure 3.2.6 CGPM-V2
Front Panel Line Art.

Poker Machine Unit - Continued:

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CGPM-V2 Connections

All external connections to the CGPM-V2 are made via the two connectors J1 and J6 which are mounted on the wiring side of the processor board. See Fig. 3.2.7

The meter interface connections are made via connector J1 which is a 16 way (0.1 inch pitch) unshrouded dual row header.

Figure 3.2.8 shows connector J1 pin assignments and orientation on the CGPM-V2 processor board.

Continued over ...

Poker Machine Unit : CGPM-V2 Connections - Continued:

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The power supply and network communications connections are made via connector J6 which is a 6 way screw terminal block.

Figure 3.2.9 Shows the CGPM-V2 power/comms connector J6 : terminal assignments, orientation, and 'control' cable configuration.

There are two other connectors on the wiring side of the CGPM-V2 processor board :-

Figure 3.2.10 shows the pin assignments for the card reader connector J2.

Figure 3.2.11 shows the pin assignments for the front panel switch strap connector J3.

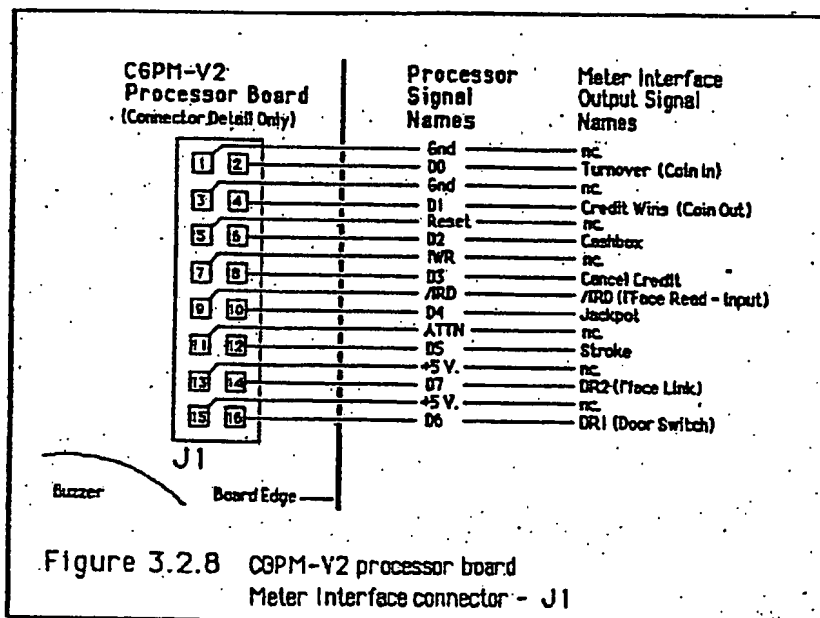


Figure 3.2.8 CGPM-V2 processor board
Meter Interface connector - J1

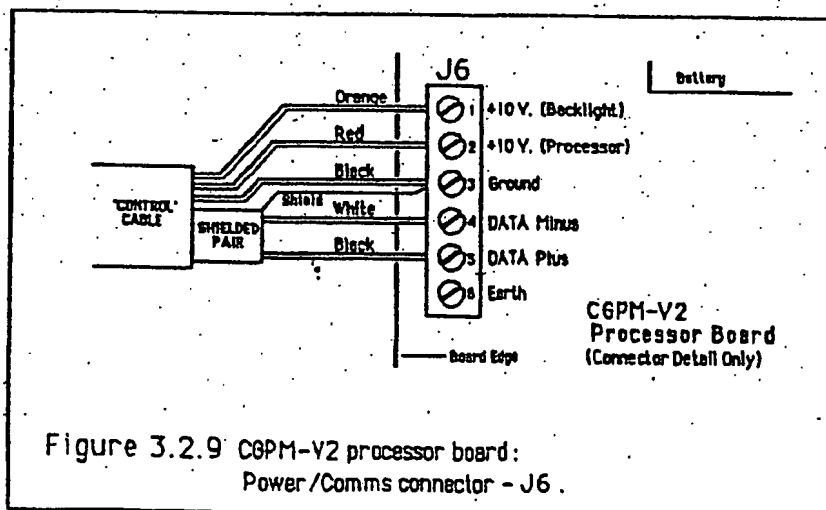
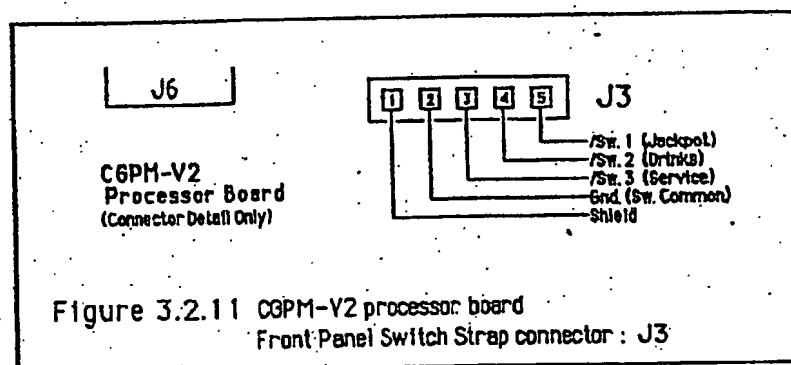
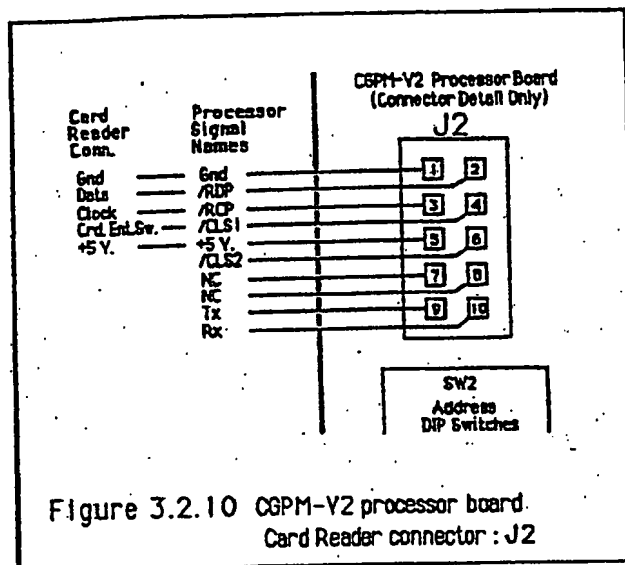


Figure 3.2.9 CGPM-V2 processor board:
Power/Comms connector - J6

Poker Machine Unit : CGPM-V2 Connections - Continued:

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CGPM-V2 Connecting Cables

The two cables that provide the external connections to a CGPM-V2 unit are the "interface cable", and the "control cable".

The interface cable (Compute Game part No. IFO1) connects the poker machine meter interface module to the CGPM-V2 and consists of a 3 metre length (approx.) of 16 way ribbon cable with a 16 way dual row IDC, transition socket at each end. This cable mates with the unshrouded connector J1 on the processor board as stated previously, however it must be noted that this connector is not self polarising so particular attention must be paid to the orientation of the "interface cable" socket when this connection is made. Orientation is determined by the position of pin 1 on both parts. Pin 1 on the interface cable socket is marked by a triangular pointer (on the same side as the polarising lug) and should agree with its ribbon cable which has wire 1 marked with a red stripe. See Fig. 3.2.8 for the orientation of connector J1.

The control cable connects the CGPM-V2 unit to power supply and network communications via the terminal block connector J6. Control cables are run in a 'star' configuration to each individual CGPM-V2 unit from (eight unit capacity) power supply modules. The control cable is a five core grey PVC sheathed cable with two of the cores present as a shielded pair. The core colours are : red, orange, and black for the power circuits, with black and white for the shielded pair which are used for the communications network.

cont'd over ...

Poker Machine Unit : CGPM-V2 Connecting Cables - Continued:

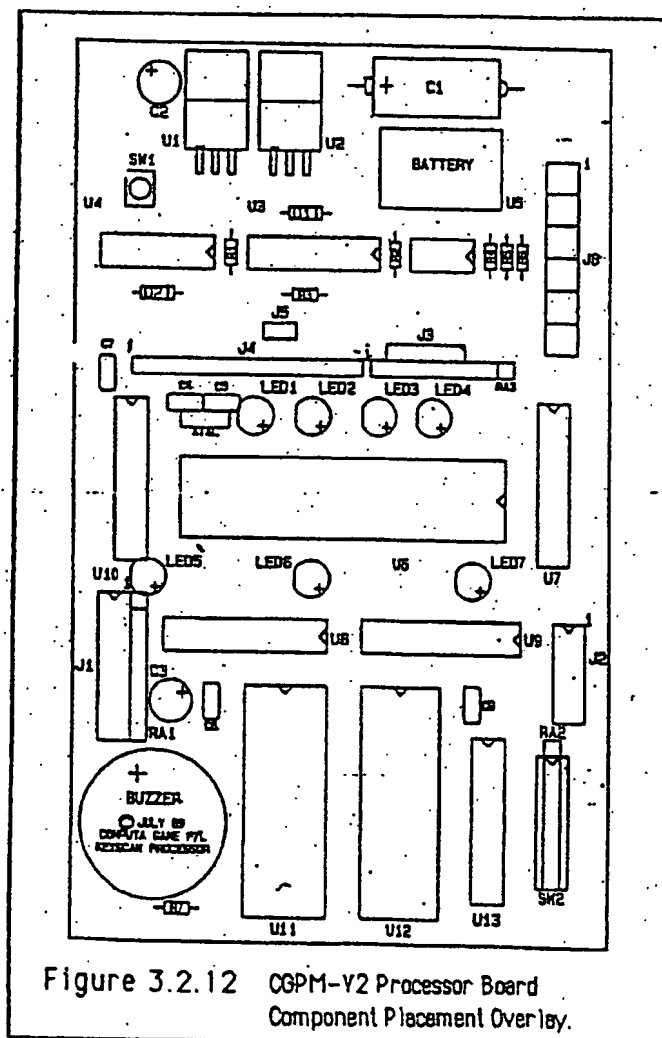
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Please Note : Whilst the usual colours for Compute Game network circuits are blue and white, the cable supplied by the manufacturer for these installations substituted the colour black for blue, so care must be taken, when working with these control cable connections, not to confuse the black power ground core with the shielded black core which is the network Data Positive circuit. See Fig. 3.2.9 for control cable termination details.

CGPM-V2 Processor Circuit Board

Figure 3.2.12 shows the CGPM-V2 processor circuit board component placement overlay. Note that this is a 'component side' view whereas when the board is mounted on a front panel what is seen is the 'wiring side' (ie. everything is 'mirror' reversed).

Note the positions and orientation of components such as :- the reset switch (SW1), the address DIP switches (SW2), the program memory EPROM (U12), the interface connector (J1), and the power/comms connector (J6).



Poker Machine Unit : - Continued :

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CGPM-V2 Address DIP Switches

The CGPM-V2 address DIP switches determine the unique network address of the unit and are set according to the desired address.

For settings : see section "Poker machine Units" - "Address DIP Switches".

Illegal Settings : The use of either of the illegal DIP switch settings on CGPM-V2 units initiates "Self Test Mode" : See Service Notes - this section (following).

POWER SUPPLIES

CGPM-V2 POWER SUPPLY MODULES

CGPM-V2 units are powered by 10 Volts DC. derived from "version 2" power supply modules.

Each version 2 power supply module can supply a maximum of eight CGPM-V2 units which are individually wired in a "star" configuration to the supply using "control" cable (see "CGPM-V2 Connecting Cables"). The "control" cables also carry the network communications circuits which are distributed via the power supply module terminations.

Version 2 power supply modules physically consist of an aluminium box approximately 180mm. high, 160mm. wide and 120 mm. deep, containing a transformer, power capacitor, and "distribution board" (printed circuit board). Mounted on one of the large faces of the box is : a power switch (push on push off) and indicator light, a mains fuseholder (3AG 1 Amp fuse), and the 240 V. mains cord entry. The "control" cables to CGPM-V2 units are distributed via a slot in the face opposite the power switch.

"Distribution" boards for version 2 power supplies were manufactured in two versions : dubbed "Mk.1" and "Mk.2". The difference between them is the number and value of the fuses fitted. Mk.1 boards have sixteen M205 250mA fuses whereas Mk.2 boards have eight M205 1 Amp. fuses.

On the distribution board : eight five way screw terminal blocks are provided for "control" cable termination (note Mk.1 and Mk.2 "control" wire to terminal configurations vary), along with two two way screw terminal blocks for the network wiring input/output.

Figure 3.2.13 shows a version 2 Mk.2 power supply distribution board including termination configurations for "control" (Mk.1 & Mk.2) and network cables.

Placement : The power supply modules in CGPM-V2 installations will usually be found mounted in the cash box area of the poker machine furniture relative to the "bank" or group of CGPM-V2 units being supplied. In the case of poker machines arranged in "carousel" format the power supply modules are sometimes mounted in the centre of the carousel.

In most cases there is a club installation diagram available for the installation in question which details the exact placement of power supply modules and the Compute Game poker machine units they are relative to.

C6PM-V2 Power Supply Modules - Cont'd...

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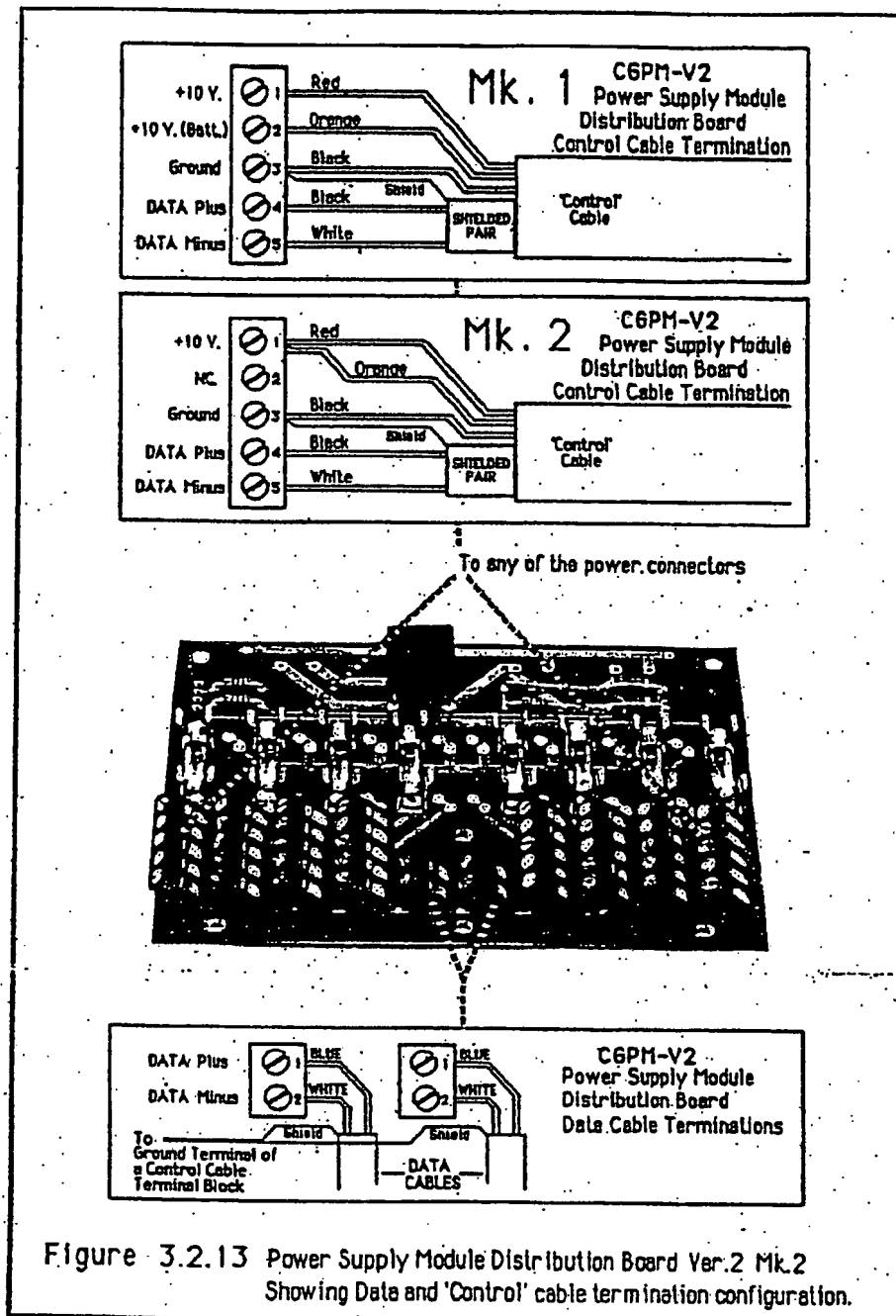


Figure 3.2.13 Power Supply Module Distribution Board Ver. 2 Mk. 2 Showing Data and 'Control' cable termination configuration.

SERVICE NOTES

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METER INTERFACE : Jackpot / Stroke Modification

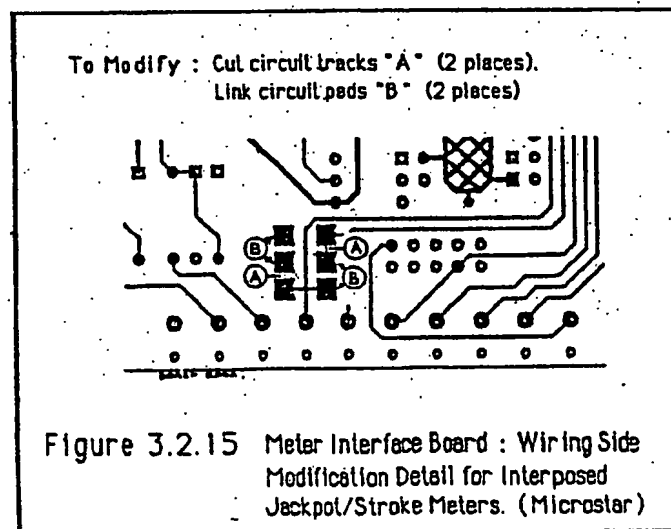
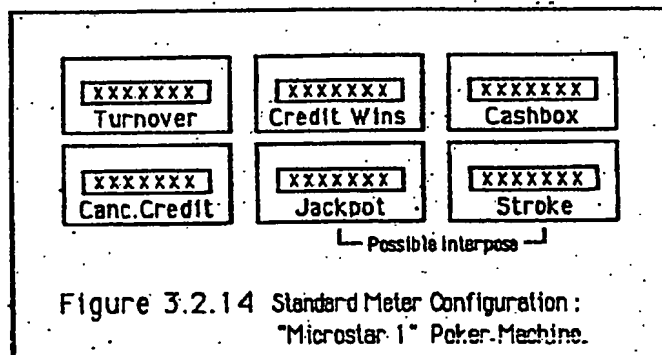
Some poker machines, in particular some Microstar 1's and all Microstar 2's, have their Jackpot and Stroke meters interchanged: requiring modification of the version 2 meter interface circuit board:-

Figure 3.2.14 shows the standard formation of the meters in a "Microstar 1" poker machine.

With reference to Fig. 3.2.14: If the Jackpot and Stroke meters are interposed then the meter interface board to be fitted to this machine requires modification, as does any meter interface board fitted to a "Microstar 2" poker machine. This modification is usually performed at installation of the Computa Game system, thereafter only being necessary in the event of a meter interface board replacement.

The modification consists of cutting two tracks and installing two bridging links on the wiring side of the meter interface circuit board.

Figure 3.2.15 shows a detail of the meter interface board wiring side modifications necessary for interposed Jackpot/Stroke meters.



SERVICE NOTES - Cont'd. ...

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CGPM-V2 DIP SWITCHES

On the processor board of the CGPM-V2 module there is a DIP switch package containing 8 switches: Figure 3.2.7 shows the position of the DIP switch package, refer also to Fig. 3.1.12 - component "SW2".

The setting of these DIP switches determines the network address of the individual CGPM-V2 module. The network address for each individual module must be unique: in that should two modules share the same address, during communications, network contentions will arise - with serious consequences for network integrity.

The switches are set using a binary code (number), which equates to the decimal value of the network address required, in the range 1 to 254. For address settings of DIP switches: see section: "Poker Machine Units - Address DIP Switches".

Alternately the 8 bit binary equivalent of the decimal address (modulo 256) can be calculated and the switches set: where Sw.1 = LSB. and Sw.8 = MSB. and switch closed = "0"; the switch values for this method are:-

Sw 1	=	1	Sw 5	=	16
Sw 2	=	2	Sw 6	=	32
Sw 3	=	4	Sw 7	=	64
Sw 4	=	8	Sw 8	=	128

The method of decimal to binary conversion, using the above switch values and for decimal numbers between 1 and 254, consists of:-

(a) subtract the switch value (starting with the highest switch: Sw.8=128) from the decimal number.

(b) if the result is positive then set the switch (Sw.8) open (binary '1').

(c) if the result is negative then set the switch (Sw.8) closed (binary '0') and consider the number in hand prior to the subtraction as the result.

(d) Now using the result of (b) or (c) and the next sequential switch and value (eg. Sw.7=64) loop to (a); continue until all switches are set.

For large networks, where the decimal address number is greater than 254, the above method requires the conversion of the original number to "modulo 256". The "modulo 256" of a number is the remainder after that number has been divided by 256, regardless of the dividend. For example the "modulo 256" of the number 276 is 20.

Invalid Addresses: Please note: decimal address numbers 0 and 255 (and any "modulo 256" equivalent) are invalid addresses.

Please Note: If the address DIP switch settings on a CGPM-V2 unit are changed: the unit must be reset, so that the new address is recognised by the unit, then recommissioned - see service note: "Reset and RAM Reset procedure".

POKER MACHINE UNITS

VERSION 2

SERVICE NOTES - Cont'd. ...

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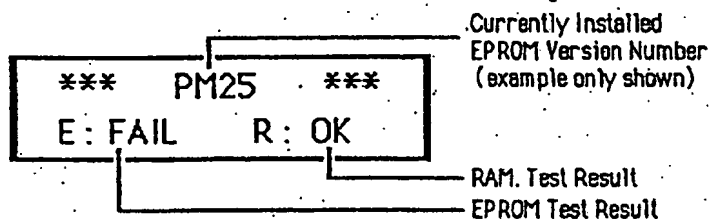
CGPM-V2 "SELF TEST" MODE

On CGPM-V2 units the option of "Self Test" is available which provides the facility to test the Random Access Memory (RAM) and the program memory (EPROM) for any faults.

Self Test mode can be performed on devices on a 'running' network without interfering with the normal operation of the network.

Method :-

1. Using a "maintenance class" card (see service note "Maintenance Card Use") : check and note the "Interface" setting (mSec.) and Jackpot parameter (nil, x1, x10) as these will need to be re-entered later.
2. Remove the CGPM-V2 unit from its plastic case.
3. Note the current address DIP switch settings.
4. Set the address DIP switches to one of the "illegal" states ie. either all switches 'on' or all switches 'off'. At this point the display window will be blank.
5. Whilst holding down the "Service" button (front panel) : press the "Reset" button on the processor circuit board, for reset button position see Fig. 3.2.7.
6. The Self Test results will now be presented on the display in the following format :-



7. The EPROM and RAM results will be either "OK" or "FAIL".
 - (a) If the EPROM result is "FAIL" then replace the EPROM :
- see service note : "How to Change an EPROM"
 - (b) If the RAM result is "FAIL" then replace the CGPM-V2 unit and return the faulty unit (with a fault description) to Compute Game Ltd. for service.
 - (c) If both results are "OK" then proceed.
8. Set the address DIP switches to the correct address :
using the previously noted settings but check to ensure that they are correct.
9. Press the "Reset" button : to force the processor to read the new DIP switch settings.
The display should now be showing "Compute Game Inactive".
10. Proceed with recommissioning procedure as detailed in service notes :
"How to Change an EPROM" - point 7 onwards - (page 3.2.21).

SERVICE NOTES - Cont'd ...

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MAINTENANCE / SUPERVISOR CARD USE

Computa Game poker machine units allow, through the use of a specially encoded card, meter readings held in battery backed memory to be read and if necessary altered, and interface switching delays (relevant to the reliability of meter readings) to be set. Also, later versions of CGPM firmware allow manipulation of a Jackpot parameter for promotional use, and for "maintenance type" cards only: the ability to toggle (enable or disable) individual paging buttons functionally.

These specially encoded "maintenance class" cards are produced in two types, according to their issue and use, being called a "maintenance" or "supervisor" card. The basic differences between the two types of card being that: a "supervisor" card, generally issued to club personnel, is operable only on equipment installed at the venue for which it is issued and concurrent with this requires the Computa Game network to be "running" to allow its use, whereas the "maintenance" type of card is operable on Computa Game equipment at any venue and does not require a "running" network. The "maintenance" type of card is only held by Computa Game P/L staff.

For a full description of "maintenance class" card usage:-
See section "POKER MACHINE UNITS - MAINTENANCE CARD USE".

RESET AND "RAM RESET" PROCEDURE

It is sometimes necessary during service procedures to "Reset" or "RAM Reset" poker machine units to force compliance with address DIP switch changes, or cure errant behavior such as a "chinese" screen display or continual beeping. Prior to a RAM Reset it is wise, if possible, to use a maintenance card to check and note the unit's "Interface" settings (including the Jackpot parameter) as these will need to be re-entered later.

"Reset" is achieved by pressing the reset button (only) on the back of the processor board (see Fig 3.2.7) and is generally only used to force compliance with new or altered address DIP switch settings. This form of reset is a processor reset only and does not effect meter values etc. held in memory; the same effect can be achieved by disconnecting the unit from power for a few minutes.

"RAM Reset" is achieved by pressing the processor reset button whilst pressing the front panel "Service" button, and is generally used in the case of errant behavior. This form of reset clears the unit memory to default values: the recorded meter values are set to 0, the "Interface Setting" is set to 6 mSec., and the Jackpot parameters are set to x1.

The unit must then be recommissioned: as detailed in service notes - "How to change an EPROM" - point 7. onwards, and will include the use of a maintenance class card in both cases, (mandatory after a RAM Reset) to ensure that the recorded meter values, the Interface setting, and the Jackpot parameters, held in the unit memory are set/restored to their correct values.

POWER SUPPLY MODULES - Mk.1 to Mk.2 Conversion

At Compute Game version 2 installations : where poker machine unit power supply modules of the Mk. 1 format are encountered, current service procedure is to convert these units to the Mk.2 format.

Conversion of a Mk. 1 power supply module to the Mk.2 format entails the removal of eight of the M205 250mA fuses on the distribution circuit board, the replacement of the remaining eight M205 250mA fuses with M205 1 Amp. fuses, and the reconfiguration of the C3PM-Y2 control cable terminations at the distribution board terminals.

The fuses to be removed are every second fuse - starting from each edge of the distribution board to the centre of the fuse row, and the control cable reconfigurations are evident from the diagrams of Fig. 3.2.13.

Mk. 1 power supply modules at some installations also contained a 6 volt SLA battery (usually orange in colour, of dimensions 100mm. x 60mm. x 25mm. approx.) - which, under a Mk.2 conversion, is redundant and should be removed and returned to Compute Game Ltd.

Figure 3.2.13 shows a version 2 Mk.2 power supply distribution board including termination configurations for "control" (Mk.1 & Mk.2) and network cables.

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HOW TO CHANGE AN E.P.R.O.M.

The acronym "EPROM" is industry parlance for - Erasable Programmable Read Only Memory and takes the form of an integrated circuit chip characterised by a quartz window in its upper surface; this quartz window is usually covered (by an identifying label), to prevent the admission of ultraviolet light and the consequent unintentional erasure of the information stored in the memory. The EPROM used in the CGPM-V2 is a 27C256 : a 256 Kbit chip in a 28 Pin dual in line package, and provides the primary program memory for the microprocessor. It determines the basic mode(s) of operation of the CGPM-V2 unit. The program stored in EPROM, sometimes including the EPROM it is stored on, is often heard referred to, in the electronic industry, as "firmware".

Whenever Computa Game system features are upgraded, particularly with regard to the operation of the CGPM units, these changes are usually in the form of revisions to the system software and firmware : which entails a change of EPROM for the CGPM units in question.

To change an EPROM in a CGPM-V2 unit requires care and a deal of caution, first you must kneel and face Mecca ...

Tools required : (a) A small (less than 100mm. OA. length) flat bladed screwdriver or a flat 70mm x 10mm x 1mm blade stepped at half its length, or (b) a large sized pair of long nose pliers with angled nose and fine point.

IMPORTANT NOTICE : STATIC CONTROL

The following procedure involves the handling of static sensitive components ; as clubs are apt to use nylon carpets etc. the problem of static electricity should not be underestimated; it is therefore mandatory to ensure the discharge of any static buildup on your person prior to handling said components.

Although the usual production method for static dissipation involves the use of wrist straps and ground leads this proves to cumbersome for normal service procedure. An effective method to discharge static is to touch some properly grounded metalwork (eg. the frame of a poker machine) after any major movement (particularly walking around or shuffling feet) and immediately prior to handling any static sensitive components : Denoted in the following text by symbol : SS.

Before proceeding it is wise to use a "maintenance class" card to check and note the current interface setting (mSec.) as this may need to be re-entered at the end of this procedure.

The following procedure description presumes EPROM changes are being performed on a limited number of units. Where all unit EPROMs are being changed in an installation the usual procedure is to power down the entire installation at source : in which case the power disconnection/reconnection procedures described should be treated accordingly.

SERVICE NOTES : How to Change an EPROM. - Cont'd ...

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Procedure :

In conjunction with the following : See Fig. 3.2.7.

1. Remove power to the CGPM-Y2 unit.
Power to the CGPM-Y2 unit can be removed in either of two ways according to circumstance :-
(a) If only one unit is to be worked on at a time, or if player pressure is such that only one unit can be out of service at a time, then power may be removed at the CGPM-Y2 unit :-
Remove the CGPM-Y2 from its case and carefully remove the red wire (in control cable) from the screw terminal block J6 (terminal 2) on the processor board. See Fig. 3.2.9.
Care must be taken to ensure that this wire does not touch ground or any other circuitry as it will be live and there is the risk of damage to circuitry and/or forfeit of the fuse in the power supply module ; it is therefore a good idea to temporarily insulate the bare end of the wire with a piece of insulating tape or other device.
(b) If it is more convenient, power to the relevant bank or group of CGPM-Y2 units may be switched off at their power supply module ; however if this method is chosen, all player cards must be removed from the relevant CGPM-Y2 units prior to powerdown to prevent the loss of play session points. :
Using the club installation diagram, locate the relevant power supply module and switch it off using the push switch on its fascia. Power supply modules are usually located in the cash box area of the poker machine furniture, or in the centre of a carousel.
2. Unplug the front panel switch strap (flexible 5 circuit strap with blue connector) so that clear access can be gained to the EPROM.
3. Remove the existing program EPROM (SS) in the following manner :-
 - ♦ The program EPROM is recognisable as the large (28 pin) socketed chip, on the back of the processor circuit board, just above the card reader. See Fig. 3.2.7.
 - ♦ The primary objective in this operation is to remove the EPROM without undue stress to the board or component and without bending the legs of the EPROM itself. The CGPM-Y2 unit should be placed or held in a steady position for this operation : one method for right handers is to support the unit, processor board uppermost, steadying the top of the unit against the chest or stomach, by holding the card reader in the left hand (palm to the supporting metalwork) and using the left thumb to keep the front panel switch strap out of the way.
 - To remove the EPROM (SS) : Two methods will be described :-
 - (a) Screwdriver method : Working from the DIP switch side of the board, slide the blade of a small flat bladed screwdriver (or blade tool - described above) under the centre of the top (indented) edge of the EPROM chip : between the chip and the socket ; aligning the screwdriver as closely as possible with the board and EPROM orientation, and with a gentle rocking (twisting) motion, insert the screwdriver under the EPROM chip as it is prised out of the socket, the rocking motion of the tool is to ensure the pins on either side of the chip are prised from the socket at the same rate. When the chip is almost out of the socket : withdraw the screwdriver and apply a little gentle finger pressure to the top (indented) edge of the chip - this will cause the chip to see-saw in the socket releasing its bottom pins ; use the screwdriver again gently to free the chip in the socket - without causing it to fall out. Now by gripping the chip by the body ends only (between the thumb and forefinger) withdraw it from the socket and place it in conductive foam or an antistatic storage tube.

cont'd over...

SERVICE NOTES : How to Change an EPROM. - Cont'd. ...

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Point 3 cont'd...

(b) Pliers method : The use of a large pair of long nose pliers, with angled jaws and fine point, is preferred by some servicepeople as a more efficient way of extracting the EPROM, the angled jaws allowing grip and control outside the confines of the module. However care must be exercised using this method as the compressive pressure and tensile stresses applied to the body of the EPROM during the process must be minimised : due to the risk of fracture of the bonding and hermetic seal of the EPROM body package.

The extraction method is similar to the screwdriver method in that one tip of the jaws of the pliers is inserted under the centre top edge of the EPROM body, between the body and the socket, and a light leverage applied to raise the chip out of its socket until the plier jaw can be slid in further and the process repeated until the chip body is able to be gripped for three quarters of its length by the plier jaws. Now the EPROM body is gripped gently but firmly in the plier jaws and the pliers gently twisted so that the EPROM is lifted (vertically) out of its socket. The EPROM is then stored in conductive foam or an antistatic tube package.

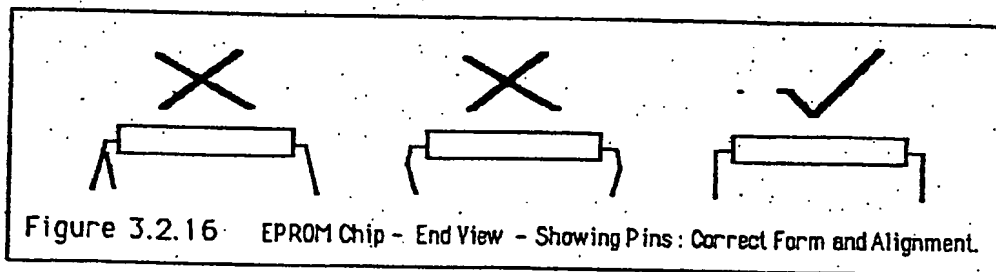


Figure 3.2.16 EPROM Chip - End View - Showing Pins: Correct Form and Alignment.

4. Insert the new program EPROM (SS) :

- Withdraw the new EPROM from its packaging, handling it by the body ends only, and sight each of the two rows of pins from the end of the chip : each row of pins should be fully aligned and square to the body of the chip :

Figure 3.2.16 shows the correct form and alignment of device pins for a hand inserted chip (eg. EPROM).

This is necessary as the chip is to be hand inserted and must align precisely with the socket. If any individual pin is bent out of alignment use a small pair of pliers to straighten and align it with the others. Commonly both rows of pins are not square to the body of the chip, as this is the way they are supplied from the manufacturer :- to modify : bend the pins in so that they are square : hold the chip with both hands using a thumb and forefinger grip at each end of the chip body, place the face of one row of pins flat against a flat hard surface (the chip body will now be resting slightly off the vertical from this surface). Now gripping the chip firmly, with a firm but gentle pressure against the surface/pin faces : roll the chip body into a vertical position. Now sight the row of pins for square and repeat the process if necessary. Take care not to overbend the row of pins as the above process is easy to repeat but an retrieving an overbent row is difficult. Repeat the process for the other row.

The object of this process is to modify the existing bend in the pins (close to the chip body) leaving the pin faces flat, - If the pin faces are bowed to produce the result : chip/socket alignment will not be true, the pins will be weakened, and bent pins during insertion will result = big trouble.

cont'd. over ...

POKER MACHINE UNITS

VERSION 2

SERVICE NOTES : How to Change an EPROM - Cont'd. ...

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Point 4 cont'd. ...

- ♦ Note the indent or notch, central on one end of the body, of the EPROM: this denotes the position of pin 1 on the device and therefore determines the orientation of the device when it is inserted in its socket.

The correct orientation for the EPROM in the CGPM-V2 is: notch to the top (away from the card reader), See Fig. 3.1.12. (EPROM chip position is U12).

- To insert the EPROM: handling the EPROM by the ends only, place it onto the socket and visually check that all the pins (on both sides of the device) are in alignment with the socket(s), if not - withdraw the device and correct any misalignment.

If all the pins are aligned then using even finger pressure centrally on the body of the device press it into the socket, for a good insertion:- an initial resistance will be felt followed by an even drag then a firm bottoming.

Now visually check all pins of the device to ensure that none are bent out of the socket or under the chip: if any pins are bent the chip must be removed and the pin(s) straightened before reinsertion. Warning: pins will break off if bent extremely or more than two or three times, rendering the device useless.

5. Reconnect the front panel switch strap: ensure that it is not misaligned.

6. Reconnect the CGPM-V2 unit to power using a reversal of the procedure adopted in point 1.

7. The CGPM-V2 unit should now display "Compute Game Inactive":

-If it does then proceed to point 8.

-If it doesn't then check:-

- (a) The EPROM is correctly oriented and socketed ie. no pins bent or hanging out, or under. - If the EPROM has been incorrectly inserted, either by orientation or misalignment, there is a very high likelihood it will have been destroyed and should be replaced.

- (b) The EPROM is the correct "category" for poker machine units: the version number of the EPROM, written on its label, should be composed of the letters "PM" followed by two numerals. Any other category of EPROM, for example those programmed for a Compute Cash Centre (label prefix "CC") or Compute Gold machine (label prefix "CG"), will produce no intelligible result, or totally inappropriate responses as in the case of a Cash Register unit EPROM (label prefix "CR") which will display "Discount Inactive" at this time.

- (c) Check the power connections (control cable) to connector J6 to ensure they are correctly configured and have not become disconnected, loose or frayed through.

- (d) Check the unit has power: as an indication the display backlight should be working, if in doubt use a multimeter to check that the (control cable) red and orange wires read approximately 10 volts DC, positive with respect to the black ground wire (not the black shielded network comms wire). If there is no evidence of power then the most likely cause is a blown fuse in the power supply module:- locate the power supply module and replace the relevant fuse, if the power supply module distribution board contains 16 fuses it is a Mk.1 unit (with 250mA fuses) and should be converted to the Mk.2 configuration (1 Amp. fuses - 8 of) - see service note: "Power Supply Modules - Mk.1 to Mk.2 Conversion".

- (e) Check the card reader and cable for faults:- disconnect the card reader cable from the processor board connector J2, then press the processor reset button and check the display for any activity. A positive result will indicate a faulty card reader or cable: locate the faulty component by substitution and replace. When reconnecting ensure correct orientation and alignment of the the reader cable connector to the processor board connector J2.

cont'd. over ...

SERVICE NOTES : How to Change an EPROM - Cont'd. ...

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Point 7 cont'd. ...

- (f) Check the meter interface subsystem for faults :- disconnect the meter interface cable from the processor board connector J1, then press the processor reset button and check the display for any activity. A positive result will indicate a faulty meter interface board or cable: locate the faulty component by substitution and replace. When reconnecting ensure correct orientation and alignment of the the interface cable connector to the processor board connector J1.
- (g) Check the address DIP switches to ensure they are not set to one of the illegal states: either all switches 'on' or all switches 'off' as this will initiate "self test mode" - see previous service note: "CGPM-Y2 Self Test Mode": point 8 onwards.
- (h) If at this point the unit still isn't working, and particularly if the display is showing a series of blocks on the first line: there is a distinct possibility that the EPROM is defective: replace the EPROM with a fresh unit using the complete preceding procedure with particular attention to "Static Control" - see notice at the beginning of this procedure.
- (i) Now if you have proceeded this far without results it's probably about time to kneel and face Mecca again, but that aside - the presumption is that the unit was working before the EPROM change so something occurred, during the procedure, resulting in the present inactivity. If the cause cannot be isolated then the complete CGPM-Y2 unit will need to be replaced and the faulty unit returned to Computa Game Ltd. (with a fault description) for service.

8. Run a "Test Poll" on the network:

Running a Test Poll is the only effective way to determine the particular state of activity of any CGPM unit on the network. The information is provided relative to the network address of the unit in question and for this procedure six results are possible: -

- (a) "No Parameters" is the desired result - proceed to point 9
- (b) "Invalid Meters" means the recorded meter values held in memory have been corrupted, possibly from before the EPROM change, this is OK at present: - proceed to point 9.
- (c) "Memory Erased" means that at some point preceeding this a "RAM Reset" was performed and all memory values are now at their default settings, this is OK at present: - proceed to point 9.
However if there is a certainty that a "RAM Reset" was not performed at any point preceeding this then there is a possibility that the memory backup battery is faulty. This can be checked by: using a maintenance class card - enter a set of meter values, remove power from the unit and wait 5 minutes or so, reconnect power to the unit - at which point "Computa Game Inactive" should be displayed, then use the maintenance card to check the previously entered values. If the entered values have changed then the battery is suspect and the unit should be returned (with a fault description) to Computa Game Ltd. for service.
- (d) "Error" means the unit is responding to the poll but its response is unintelligible: This may indicate address contention (two units responding to the same address call) so check the unit's address DIP switches to ensure they are correctly set for its unique address, also check the DIP switches on any other unit that has been worked on and is showing an "Error" or "Not Answering" result in the same Poll. Please Note: if any DIP switch settings are altered the unit must be reset, by pressing the Reset button on the processor board, before it will comply with the new setting.
- For switch settings: see section - "Poker Machine Units - Address DIP Switches".

cont'd. over ...

SERVICE NOTES : How to Change an EPROM - Cont'd. ...

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Point 8 (d) cont'd. ...

- ♦ If the above checks show no faults then : perform a "RAM Reset" on the unit by pressing the processor reset button and the front panel "Service" button concurrently, then run another Test Poll. If the test poll result is still "Error" (particular to that unit - see below) then replace the unit and return it to Computa Game Ltd. (with a fault description) for service.

If there is a profusion of "Error"s on one Test Poll, or random intermittent "Error"s on a number of successive Test Polls, then the most likely cause is a short (or partial short : one side to ground) in the network wiring and this must be traced by deductive removal of network branches/units until the wiring fault is found and repaired.

- (e) "Not Answering" means there was no response from the unit when it was polled, so :
 - i. Check the unit's network connections (control cable and processor board connector J6) to ensure they have not become disconnected, loose, or frayed through.
 - ii. Check the unit's address DIP switches to ensure they are correctly set - see point 8 (d) above. Please Note : if any DIP switch settings are altered the unit must be reset, by pressing the Reset button on the processor board, before it will comply with the new setting.
 - iii. If the above checks show no faults, then : perform a "RAM Reset" on the unit by pressing the processor reset button and the front panel "Service" button concurrently.
 - iv. Run another Test Poll and revert to beginning of point 8, if however this loop has been run a number of times already with no success then replace the faulty unit and return it to Computa Game Ltd. (with a fault description) for service.
- (f) "Wrong Category" means that the unit at that address is not responding according to the category allocated for that address. There are several possible reasons for this occurrence :
 - i. The wrong category of EPROM has been fitted to the device in question - at present this will only occur with Cash Register units vs. Poker Machine units (or Computa Cash Centres vs. Computa Gold machines) as they are of the same physical family, any other category of EPROM in a Poker Machine unit will not even achieve the "Computa Game Inactive" screen display.
 - ii. The address DIP switch settings on the device in question may have been altered, accidentally or otherwise, to a network address for which the category assignment (in the Computa Game program - on the Apple IIOS host computer) differs from the category of the device. If the switch setting alteration was accidental it is more likely that network contention will occur - see point 8 (d) and (e) ii. above.
 - iii. The wrong category has been assigned to the address in question. Categories are assigned in the Computa Game program on the Apple IIOS :
 - at :- Menu : H. Configure Scanner Stations. : Instal/View Scanner Set-up.

- 9. Turn off (NB: * NOT deselect) the network printer, then
 - Start the network.
 - Run the network for 5 to 10 minutes, then
 - Stop the network.

NB: * Whenever the network is started the printer will print out a "scanner fault report", this is not required during this service procedure so to save paper etc. the printer is turned off. If the printer is not turned off but "deselected" then the network start (or restart) will "hang" until the printer is "selected" again or turned off.

cont'd. over ...

SERVICE NOTES : How to Change an EPROM - Cont'd. ...

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10. Run a Test Poll : At this stage the possible responses from the CGPM-V2 units in question will be :-

- (a) "Ready" is the desired response : proceed to point 11.
- (b) "Invalid Meters" at this stage, is the logical progression from the prior responses per point 8 (b) or (c) : proceed to point 11.
- (c) Any other result then :
 - i. If this is the first time this point has been reached :- revert to point 9.
 - ii. If this is the second time this point has been reached :- revert to point 8.
 - iii. If this is the third time this point has been reached :- then replace the unit and return it to Computa Game Ltd. (with a fault description) for service.

11. Use a maintenance class card to check or re-enter the recorded meter values in the CGPM-V2 unit memory.

As a matter of procedure the recorded meter values must be checked on any unit that has been serviced. With units that have shown a previous result of "Invalid Meters" the re-entry of meter readings is mandatory.

- o "Supervisor" type cards require a "running" network for this step to be performed. See section "Poker Machine Units - Maintenance Card Use".

12. Start the network, and congratulations.

END SERVICE NOTES.

POKER MACHINE UNITS

ADDRESS DIP SWITCHES

Decimal Address

NNN

ON
OFF



Switch (Bit) Number

Bit Switch Shown As

ON or CLOSED

001 =

002 =

003 =

004 =

005 =

006 =

007 =

008 =

009 =

010 =

011 =

012 =

013 =

014 =

015 =

016 =

017 =

018 =

019 =

020 =

021 =

022 =

023 =

024 =

025 =

026 =

027 =

028 =

029 =

030 =

031 =

032 =

033 =

034 =

035 =

036 =

037 =

038 =

039 =

040 =

041 =

042 =

043 =

044 =

045 =

046 =

047 =

048 =

049 =

050 =

051 =

052 =

053 =

054 =

055 =

056 =

057 =

058 =

059 =

060 =

061 =

062 =

063 =

064 =

065 =

066 =

067 =

068 =

069 =

070 =

071 =

072 =

POKER MACHINE UNITS

ADDRESS DIP SWITCHES

SPECIFICATION

Decimal Address

NNN

ON
OFF



Switch (Bit) Number

Bit Switch Shown As

ON or CLOSED

313

073 =	097 =	121 =
074 =	098 =	122 =
075 =	099 =	123 =
076 =	100 =	124 =
077 =	101 =	125 =
078 =	102 =	126 =
079 =	103 =	127 =
080 =	104 =	128 =
081 =	105 =	129 =
082 =	106 =	130 =
083 =	107 =	131 =
084 =	108 =	132 =
085 =	109 =	133 =
086 =	110 =	134 =
087 =	111 =	135 =
088 =	112 =	136 =
089 =	113 =	137 =
090 =	114 =	138 =
091 =	115 =	139 =
092 =	116 =	140 =
093 =	117 =	141 =
094 =	118 =	142 =
095 =	119 =	143 =
096 =	120 =	144 =

POKER MACHINE UNITS

ADDRESS DIP SWITCHES

Decimal Address

NNN =

ON
OFF



Switch (Bit) Number
Bit Switch Shown As
ON or CLOSED

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145 =	
146 =	
147 =	
148 =	
149 =	
150 =	
151 =	
152 =	
153 =	
154 =	
155 =	
156 =	
157 =	
158 =	
159 =	
160 =	
161 =	
162 =	
163 =	
164 =	
165 =	
166 =	
167 =	
168 =	

169 =	
170 =	
171 =	
172 =	
173 =	
174 =	
175 =	
176 =	
177 =	
178 =	
179 =	
180 =	
181 =	
182 =	
183 =	
184 =	
185 =	
186 =	
187 =	
188 =	
189 =	
190 =	
191 =	
192 =	

193 =	
194 =	
195 =	
196 =	
197 =	
198 =	
199 =	
200 =	
201 =	
202 =	
203 =	
204 =	
205 =	
206 =	
207 =	
208 =	
209 =	
210 =	
211 =	
212 =	
213 =	
214 =	
215 =	
216 =	

POKER MACHINE UNITS

ADDRESS DIP SWITCHES

Decimal Address

NNN =

ON
OFF



Switch (Bit) Number

Bit Switch Shown As

ON or CLOSED

315

217 =

218 =

219 =

220 =

221 =

222 =

223 =

224 =

225 =

226 =

227 =

228 =

229 =

230 =

231 =

232 =

233 =

234 =

235 =

236 =

237 =

238 =

239 =

240 =

241 =

242 =

243 =

244 =

245 =

246 =

247 =

248 =

249 =

250 =

251 =

252 =

253 =

254 =

ILLEGAL SETTINGS

WARNING :-

These switch settings are only used for specific installation / service operations - their use under any other circumstances will compromise Network integrity - possibly resultant in :
Network failure.

For further information see the install / service notes relevant to the particular version of Computa Game processor in question.



POKER MACHINE UNITS

ADDRESS DIP SWITCHES

SPECIFICATION

LARGE NETWORKS : For networks larger than 254 devices ; address DIP switch settings for individual devices use the same patterns as the 1-254 settings, with the devices themselves being connected to a specific branch of the expanded network relative to their address range (eg. 1 - 254, 257 - 510, 513 - 766, etc.)

For LARGE NETWORK Address Equivalents : See Table Below :-

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FORM : LARGE NETWORK ADDRESS : USE SWITCH PATTERN

XXX . YYY ZZZ = AAA

NOTE :

INVALID ADDRESSES : 255, 256, 510, 511, 767, 768

TABLE :

257	513	769	001
258	514	770	002
259	515	771	003
260	516	772	004
261	517	773	005
262	518	774	006
263	519	775	007
264	520	776	008
265	521	777	009
266	522	778	010
267	523	779	011
268	524	780	012
269	525	781	013
270	526	782	014
271	527	783	015
272	528	784	016
273	529	785	017
274	530	786	018
275	531	787	019
276	532	788	020
277	533	789	021
278	534	790	022
279	535	791	023
280	536	792	024
281	537	793	025
282	538	794	026
283	539	795	027
284	540	796	028
285	541	797	029
286	542	798	030
287	543	799	031
288	544	800	032
289	545	801	033
290	546	802	034
291	547	803	035
292	548	804	036
293	549	805	037
294	550	806	038
295	551	807	039
296	552	808	040
297	553	809	041
298	554	810	042
299	555	811	043
300	556	812	044
301	557	813	045
302	558	814	046
303	559	815	047
304	560	816	048
305	561	817	049
306	562	818	050
307	563	819	051
308	564	820	052
309	565	821	053
310	566	822	054
311	567	823	055
312	568	824	056
313	569	825	057
314	570	826	058
315	571	827	059
316	572	828	060
317	573	829	061
318	574	830	062
319	575	831	063
320	576	832	064
321	577	833	065
322	578	834	066
323	579	835	067
324	580	836	068
325	581	837	069
326	582	838	070
327	583	839	071
328	584	840	072
329	585	841	073
330	586	842	074
331	587	843	075
332	588	844	076
333	589	845	077
334	590	846	078
335	591	847	079
336	592	848	080

337	593	849	081
338	594	850	082
339	595	851	083
340	596	852	084
341	597	853	085
342	598	854	086
343	599	855	087
344	600	856	088
345	601	857	089
346	602	858	090
347	603	859	091
348	604	860	092
349	605	861	093
350	606	862	094
351	607	863	095
352	608	864	096
353	609	865	097
354	610	866	098
355	611	867	099
356	612	868	100
357	613	869	101
358	614	870	102
359	615	871	103
360	616	872	104
361	617	873	105
362	618	874	106
363	619	875	107
364	620	876	108
365	621	877	109
366	622	878	110
367	623	879	111
368	624	880	112
369	625	881	113
370	626	882	114
371	627	883	115
372	628	884	116
373	629	885	117
374	630	886	118
375	631	887	119
376	632	888	120
377	633	889	121
378	634	890	122
379	635	891	123
380	636	892	124
381	637	893	125
382	638	894	126
383	639	895	127
384	640	896	128
385	641	897	129
386	642	898	130
387	643	899	131
388	644	900	132
389	645	901	133
390	646	902	134
391	647	903	135
392	648	904	136
393	649	905	137
394	650	906	138
395	651	907	139
396	652	908	140
397	653	909	141
398	654	910	142
399	655	911	143
400	656	912	144
401	657	913	145
402	658	914	146
403	659	915	147
404	660	916	148
405	661	917	149
406	662	918	150
407	663	919	151
408	664	920	152
409	665	921	153
410	666	922	154
411	667	923	155
412	668	924	156
413	669	925	157
414	670	926	158
415	671	927	159
416	672	928	160
417	673	929	161
418	674	930	162
419	675	931	163
420	676	932	164
421	677	933	165
422	678	934	166
423	679	935	167

424	680	936	168
425	681	937	169
426	682	938	170
427	683	939	171
428	684	940	172
429	685	941	173
430	686	942	174
431	687	943	175
432	688	944	176
433	689	945	177
434	690	946	178
435	691	947	179
436	692	948	180
437	693	949	181
438	694	950	182
439	695	951	183
440	696	952	184
441	697	953	185
442	698	954	186
443	699	955	187
444	700	956	188
445	701	957	189
446	702	958	190
447	703	959	191
448	704	960	192
449	705	961	193
450	706	962	194
451	707	963	195
452	708	964	196
453	709	965	197
454	710	966	198
455	711	967	199
456	712	968	200
457	713	969	201
458	714	970	202
459	715	971	203
460	716	972	204
461	717	973	205
462	718	974	206
463	719	975	207
464	720	976	208
465	721	977	209
466	722	978	210
467	723	979	211
468	724	980	212
469	725	981	213
470	726	982	214
471	727	983	215
472	728	984	216
473	729	985	217
474	730	986	218
475	731	987	219
476	732	988	220
477	733	989	221
478	734	990	222
479	735	991	223
480	736	992	224
481	737	993	225
482	738	994	226
483	739	995	227
484	740	996	228
485	741	997	229
486	742	998	230
487	743	999	231
488	744	1000	232
489	745	1001	233
490	746	1002	234
491	747	1003	235
492	748	1004	236
493	749	1005	237
494	750	1006	238
495	751	1007	239
496	752	1008	240
497	753	1009	241
498	754	1010	242
499	755	1011	243
500	756	1012	244
501	757	1013	245
502	758	1014	246
503	759	1015	247
504	760	1016	248
505	761	1017	249
506	762	1018	250
507	763	1019	251
508	764	1020	252
509	765	1021	253
510	766	1022	254

POKER MACHINE UNITS

MAINTENANCE CARD USE

MAINTENANCE / SUPERVISOR CARD USE

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OVERVIEW

Computa Game processor units allow, through the use of a specially encoded card, meter readings held in battery backed memory to be read and if necessary altered, interface switching delays (relevant to the reliability of meter readings) to be set, and other factors such as promotional jackpot parameters and paging functions to be enabled. These functions are mandatory during the installation and commission, or service, of Computa Game networks, and helpful under normal circumstances particularly in the case of rogue poker machinery.

The specially encoded cards are produced in two types, according to their issue and use, being called a "maintenance" or "supervisor" card. The basic differences between the types of card being that : a "supervisor" card is operable only on equipment installed at the venue for which it is issued and concurrent with this requires the Computa Game network to be "running" to allow its use, whereas the "maintenance" type of card is operable on Computa Game equipment at any venue and does not require a "running" network. The "maintence" type of card is only held by Computa Game P/L. staff.

In the following descriptive text, unless otherwise stated, : the term maintenance card also covers supervisor cards, and in the interests of brevity the acronym CGPM will mean : "Computa Game processor - poker machine unit".

MAINTENANCE CARD FUNCTIONS:

1. The Entry Screen Display allows an operator to :-
 - a. Determine the network address of the unit, (as set by units' DIP switches).
 - b. Determine the ID. number of the card inserted.
2. The Totals Option allows an operator to :-
Read/Modify the recorded meter reading values, as held in the units' battery backed memory.
3. The Interface Option allows an operator to :-
 - a. Read/Modify the electrical time delay setting of the meter interface connections (to eliminate undersampling/oversampling of meter pulses).
 - b. Read/Modify the units' "jackpot parameter" : the factor relating jackpot meter pulses to coins paid (for promotional use).
4. The Paging Option (available to "maintenance" type cards only) allows an operator to :-
 - a. Enable/Disable individually the functional effect of the Jackpot, Drinks, or Service, ... paging buttons present on the front panel of the unit.
 - b. Read/Modify the units' "Random Bonus Threshold" : the dollar value of "coin in" required for a player to become eligible for a Random Bonus.

USING A MAINTENANCE CARD :

The front panel of a CGPM contains a card reader, three pushbutton switches labelled Jackpot, Drinks, and Service, and an alphanumeric display.

A maintenance card is used by inserting the card into the reader of the CGPM in question, then by using the three switches in an interactive fashion with the display, with any modified settings being stored and logged on the network, when the card is withdrawn from the reader.

For early versions of Computa Game installations and software please note material under heading : "Special Situations".

The front panel switches of the CGPM perform functions different to their normal meanings during the maintenance mode: briefly :-

- The Jackpot switch functions as a <Step> switch.
- The Drinks switch functions as a <Increment> switch.
- The Service switch functions as a <Select> switch.

POKER MACHINE UNITS

MAINTENANCE CARD USE




THE TOTALS OPTION - Cont'd.

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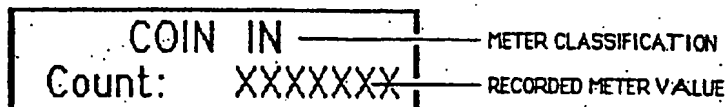
Note 1: The physical position in the poker machine of the Jackpot and Stroke meters are sometimes interchanged (particularly in Ainsworth machinery), although they are usually clearly labelled they sometimes are not: caution should be exercised and if in doubt contact a floor supervisor.

Note 2: The Jackpot meter value recorded in the CGPM memory and on the meters in most poker machines, is recorded as a "coins x 10" value; however on most of the new video poker machines with "soft" meters the Jackpot value is recorded as a "coins" value i.e. will show a value 10 times that of the CGPM reading: the usual procedure in this case is to drop the last digit (which is always 0 anyway) when transposing the poker machine reading to the CGPM recorded value.

USING THE TOTALS OPTION

-  Press the Jackpot button (repeatedly if necessary) until the menu screen is displayed.
-  If the Totals option is not selected (blinking) press the Service button to select it.
-  Press the Jackpot button to step to (enable) the option.

When the totals option is enabled each of the six meter screens will be displayed in sequence, beginning with the Coin In screen, for example:-






MAINTENANCE CARD - TOTALS OPTION SCREEN DISPLAY (Example)
- Shown: "Coin In" Meter Classif.

The top line of the display indicates the meter classification in question.

The recorded meter value is displayed as a seven digit decimal number: the first digit of which, upon entry to the screen, is displayed as blinking: indicating that it is selected and can be modified.

To modify a recorded meter value:

-  - Press the Jackpot button to step to the meter classification to be modified:
 - button steps to the next meter classification each time it is pressed.
-  - Press the Service button to select the digit to be modified:
 - button selects the digit to the right of that currently selected each time it is pressed.
-  - Press the Drinks button to increment the digit selected:
 - button increments the selected digit by one each time it is pressed.
- ◊ - All buttons operate in "wraparound" mode (i.e. in a circular fashion), for example: a value of 9 is incremented to 0 at the next press of the Drinks button.
- ◊ - To quit or exit all functions: See heading "Maintenance Card:- To Quit"

THE INTERFACE OPTION

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The interface option allows:

- (a) The current setting of the CGPM meter interface pulse width to be read or modified.
- (b) The "jackpot parameter" of the CGPM unit to be read or modified.

(a) Whilst the meter interface circuitry attached to the CGPM unit provides for electrical isolation and some electrical noise suppression, the primary task of reading and accurately interpreting the meter pulses from the poker machine is performed by the CGPM processor - to achieve this the CGPM processor samples the meter interface inputs every millisecond (mS.), with any meter input being required to satisfy a minimum pulse width (time in either the active or non-active state) to be regarded as a true signal.

The pulse width can be set in the range: 2 mS. to 20 mS. in 1 mS. increments, with settings in the 2mS.-10 mS. range found, from experience, to be the most useful. At installation and commission of Computa Game systems: all CGPM unit pulse widths are set to 2 mS. - except those attached to Ainsworth machines which are set to a pulse width of 6 mS., with adjustments being made from there.




The default setting (after a "RAM Reset") is 6 mS. for the interface pulse width on all versions of CGPM unit.

Primarily: The need to modify the meter interface pulse width setting is only evidenced by the occurrence of inaccurate recorded meter reading values in the CGPM unit. As a general guide, when the CGPM readings are compared to the poker machine meters:- If the CGPM unit is overcounting then increase the interface pulse width. If the CGPM unit is undercounting then reduce the interface pulse width. It should be noted however that occasionally a poker machine will show disparities in its metering, evidenced by cash box tallies, due to a fault in the poker machine itself, which can not be cured by pulse width manipulation: the floor supervisor will generally be aware of these machines if and when they occur.

(b) The primary use of a Computa Game system, apart from the obvious automated recording of poker machine metering, is as a promotional tool. One of the many promotional possibilities is the option of bonuses awarded on the basis of poker machine "coin out" or coins won which includes jackpots. A fair percentage of poker machines contain Jackpot meters which record, separately to their Coin Out meter, coins won under jackpot conditions. The problem is that these machines do not comply to a standard regarding the coin number value of the Jackpot meter pulses being recorded by the CGPM unit. For this reason an extension to the interface option is provided allowing a "jackpot parameter" (or jackpot scale) of: 'nil', 'x1', or 'x10' which is set to comply with the scale factor of the poker machine to which the CGPM unit is connected thereby allowing the unit to accurately reflect (on the network) the number of coins paid out.

The default setting (after a "RAM Reset") for the jackpot parameter (or scale) is x1.

USING THE INTERFACE OPTION

-  Press the Jackpot button (repeatedly if necessary) until the menu screen is displayed.
-  Press the Service button to select the interface option (selected when blinking).
-  Press the Jackpot button to step to (enable) the option.

When the interface option is enabled: the pulse width screen is displayed as follows:-

PULSE WIDTH
CURRENT VALUE SET

PULSE WIDTH
XX mSec.


MAINTENANCE CARD - INTERFACE PULSE WIDTH SCREEN DISPLAY

continued over ...

USING THE INTERFACE OPTION - Continued...

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To modify the current pulse width setting (shown blinking):

-  Press the Drinks button to increment the value:
The value is incremented by 1 mSec. each time the Drinks button is pressed.
Should the value need to be decremented - use repeated increment as the function operates in "wraparound" mode.

-  Press the Jackpot button to step to the "jackpot parameter" extension:


The "jackpot parameter" screen will now be displayed in the following format :-

JACKPOT PARAMETER
CURRENT VALUE SET

JACKPOT SCALE
x 10

MAINTENANCE CARD - JACKPOT PARAMETER SCREEN

To modify the current "jackpot parameter" setting:-

-  Press the Drinks button to increment the parameter setting:
The jackpot "parameter" or scale, as explained previously, is the number of coins paid implied by one pulse on the poker machine Jackpot meter circuit.
There are three options: nil, x 1, x 10, available through "wraparound" increment.

-  Press the Jackpot button to return to the menu screen.

- ♦ To quit or exit all functions: Remove card - See heading "Maintenance Card:- To Quit"

POKER MACHINE UNITS

MAINTENANCE CARD USE

THE PAGING OPTION

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NOTE: This option is only available to Computa Game "maintenance" type cards

The Paging Option allows:

- (a) The functional effect of the paging buttons (Jackpot, Drinks, and Service) on the front panel of the CGPM unit, to be toggled "on" or "off".
- (b) The dollar value of the "Random Bonus Threshold" of the CGPM unit to be read or modified.

(a) Whilst Computa Game networks provide access to full paging facilities, especially when installed in conjunction with a "Teletreacer" paging system or the like, these facilities are not required to be fully implemented at some installation sites. For this reason, and to lessen player confusion/expectation where certain paging services are unavailable, the facility to individually disable the Jackpot, Drinks, or Service, paging buttons on the CGPM unit is provided. When a paging button has been disabled (toggled 'off') using this function: the CGPM unit will display "SERVICE Unavailable" when that button is pressed.

The default setting (after a "RAM Reset") for the paging buttons is:-

Jackpot - ON, Drinks - OFF, Service - ON

(b) A promotional option of the Computa Game system is the ability to issue random bonuses: small gifts, meals, or whatever, to eligible players. These bonuses are issued at random by the network host computer, and to be eligible: at the time the random bonus is issued - a player must have his/her Computa Game card inserted in a CGPM unit and must, since inserting their card, have played (on the poker machine attached) coin exceeding the dollar value set by the "Random Bonus Threshold" setting of the CGPM unit. Of note in connection with the aforementioned is that once a player's card is removed from a unit: any coin input to that unit's poker machine is immediately void with respect to the Random Bonus Threshold.

The "Random Bonus Threshold" can be set from \$00 to \$99 in \$1 increments.

The default setting (after a "RAM Reset") for the Random Bonus Threshold is \$5.

USING THE PAGING OPTION

- ◊ The paging option can only be enabled from the ENTRY SCREEN display. If other functions have been performed it is necessary to:- REMOVE and RE-INSERT your maintenance card.

- When the ENTRY SCREEN is displayed:-

 Press the Drinks button to enable the paging option:-

When the paging option is enabled the first of three paging button option screens will be displayed in the following format:-

PAGING BUTTON TYPE	PAGING SETUP Jackpot on	FUNCTIONAL STATE (Blinking)
--------------------	-----------------------------------	--------------------------------

MAINTENANCE CARD - PAGING OPTION SCREEN
Shown: Screen 1: Jackpot Button Status



- ◊ The second line of the paging option screen determines the paging button type and functional status. Three paging option screens will be displayed, relative to the button type, in the sequence: Jackpot, Drinks, and Service. The functional status of each button type can be either "on" or "off".

cont'd. over ...


USING THE PAGING OPTION - Continued ...

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To modify the current paging button functional status :-

-  Press the Drinks button to toggle the button status from "on" to "off", or vice versa.
-  Press the Jackpot button to step to the next paging option screen :
 - (next paging button type in the sequence).

Continuing :-

-  The third time the Jackpot button is pressed :
 - The sequence of paging button screens will be complete.
 - The "Random Bonus Threshold" extension to the paging option will now be enabled.

The Random Bonus Threshold screen will now be displayed in the following format :-




RANDOM BONUS
Threshold : \$XX

RANDOM BONUS THRESHOLD
CURRENT VALUE SET
(Selected Digit Blinking)

MAINTENANCE CARD - RANDOM BONUS THRESHOLD SCREEN

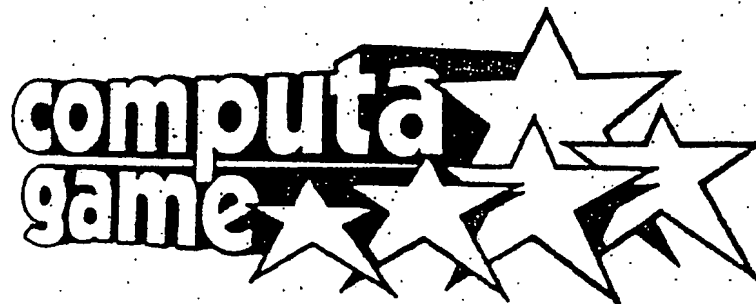
- ◇ The Random Bonus Threshold value can be set in the range \$00 to \$99 in \$1 increments. The value is always displayed as two digits which are individually selectable for modification with the selected digit displayed as blinking.

To modify the currently set Random Bonus Threshold value :

-  Press the Service button to select the digit to be modified (selected digit will blink).
-  Press the Drinks button to increment the digit selected.
 - value increments by 1 each time the button is pressed.
 - decrement value by repeated increment -
(increment operates in "wraparound" mode).
-  Press the Jackpot button to loop to the first of the paging button option screens.

- ◇ To Quit or Exit the Paging Option - Remove your maintenance card from the CGPM unit.

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The Software Manual

Revision 3

• For Computa Game Software Version 2.41

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This Manual
Revision 3

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For Computa Game Software
Version 2.41

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Published and distributed by
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PREFACE

Your Computa Game club system is an extremely powerful and versatile network designed to allow you to automatically provide added incentives to card holders according to a timetable of events that you can determine yourself. The functions provided in this program control the Computa Game door machine (Computa-Gold), the cash register discounting system, and the poker machine data retrieval and bonus scheme (Computa Game Poker Machine Units).

Each unit, no matter what its function has the ability to communicate with your players both visually and audibly with either a 16 character by 2 line liquid crystal display, or a 9 inch monochrome TV monitor, and beeps or short tones. Each one of these displays can be designed by the club (there are 72 of them) and allow you to say what you want to whom you want, when you want.

Each category of equipment can be separately controlled to perform differently at different times of the day or week. In other words you can decide how many tickets you wish to give your players from the Computa Gold machine and when and how often they can get them, what discount they will receive at a cash register at any particular time and how often they can have it, and what bonus points are being paid to your poker machine players from coin-in, coin-out, or drop combinations at what times of the day or week.

As well as this you can select up to four different categories of bonuses to be paid to your players at random (not related to any of the above events) and how many of them you want to pay over whatever time span you want.

The system will also read the meters of your poker machines and can communicate with your own club computer to enhance the analysis program you are already using and are familiar with.

Specifications are provided in Section 4 of this manual to allow any computer to talk to this system, once a suitable program is written by the vendor of your club system. In the same way membership information can be exchanged between systems so that the Computa Game units always know the names and the birthdays of your players. These communication programs already exist for the Dataview, Ideal, Qantel, King Street, Pulse and Apollo Computer Companies.

Full three button paging is provided on all poker machine units and a single service button for cash registers, and these calls can be sent to any paging system capable of talking to the Computa Game host via the simple protocol also provided in Section 4 of this manual.

So, now that you have all this gear, and can do all these things, how do you make it work for you? We believe the software is easy to use and relatively self explanatory once you understand a few basic points. Remember that the computer will only do what you tell it to do, and the most important part of setting up this program is deciding what it is that you want to happen in the first place.

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Section 4 : Communications Protocol

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THE CARDS

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PRINTING.

It is recommended that the following information is printed on each card:-

Members:

1. Information on the usage of this card is being recorded so that accurate payment of bonuses can be made.

Visitors:

1. This is not an Honorary Temporary Membership card.
2. This card is valid only until the expiry date and all bonuses accrued must be redeemed before that date.
3. Information on the usage of this card is being recorded so that accurate payment of bonuses can be made.

CONFORMATION.

Cards used should conform to :- American National Standards Institute (ANSI) x4.13 - 1983.

Specific highlights are:-

1. Cr - 80 card size
2. Card thickness = 0.030 inches +/- 5%
3. Surface = Glossy with press polish of two microinches RMS or less.
4. Surface of PVC (polyvinylchloride) or PVC with acetate.
5. No surface imperfections, blemishes or discontinuities visible to the naked eye.
6. No embedded foreign particles.

ENCODING.

The Compu Game system uses cards that have been encoded with a fixed length ten digit data field, plus a check digit.

These numbers are used to determine the following characteristics:-

Digits 1 - 3 = Site Code (Venue Identification) 000 - 654

Digit 4 = Time Code (Year Number) 0 - 9

Digit 5 = Category Number 0 - 9

- 0 = Male Member
- 1 = Female Member
- 2 = Male Associate Member
- 3 = Female Associate Member
- 4 = Male Staff Member
- 5 = Female Staff Member
- 6 = Male Visitor
- 7 = Female Visitor
- 8 = Master Card
- 9 = Security Card

Digits 6 - 10 = I.D. (Membership Number, range : from 00001 - 99999).

Digit 11 = Check Digit

Cards that are presently encoded with a ten digit number (no check digit) will still be accepted by the system. Cards with no check digit have significantly greater chance of misreading.

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ENCODING FORMATS

Computa Game utilises track 2 for all its encoding uses.

All formats employ the framing and parity inclusion of standard encoders ie.: start and stop frame characters, 4 bit digits with a fifth parity bit and a run length parity.

Due to the limitations of the run length parity process, an enhanced check process is utilised. The extra digit (the eleventh) is an additional check computed as the modulo 10 of the weighted sum of the first 10 digits.

The weighting makes use of the random sequence [7,2,5,1,0,9,3,8,4,6] for digit values 0-9 respectively.

Example: 1490000101 has a check digit of 7

$$\text{ie. } 1490000101 = 2+0+6+7+7+7+2+7+2 = 47 \text{ mod } 10 = 7$$

APPLE IIGS SYSTEM HOST

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THE KEYBOARD

The Apple IIGS® keyboard is a little different from your normal IBM® keyboard (Apple people feel the other way round!). If you look at it you will see that the caps lock is in the bottom left hand corner and is a toggle (click on/ click off) type key. The caps lock is on when the key is depressed.

In the following descriptions of the program and its use: symbols will be used to denote the various (non-alphabetic) keys to be used.

These symbols are :

- ⌘ = The open apple (or command) key.
- ← = The left arrow key.
- = The right arrow key.
- ↑ = The up arrow key.
- ↓ = The down arrow key.

Key combinations when required will be denoted as separated by a hyphen :

for example : ⌘ - ↓ = The open apple key in conjunction with the down arrow key.

The up/down and left/right arrows perform much the same task as with the IBM but may appear to be in an unfamiliar position. These keys are used a lot so you will soon get used to them.

The open-apple key ⌘ (also known as the "command" key : bottom row third from left on the keyboard) is similar to the IBM "alt" key in operation, and is in a similar position. This key is used in conjunction with other symbols on the keyboard to perform various tasks.

Before setting out these functions let me first explain that a "cursor" is the little flashing light on the screen that shows you where the next character you type will appear, and that a "field" is the area that you are working in.

To get the cursor into the position where you want to work you use:-

- ⌘ - ←, or ⌘ - →, to select the previous, or next, field.
- ← or → to move within a field.
- ↑ or ↓ for previous or next event, or message screen.

Practice moving the cursor around the screen until you think you've got the "feel" of getting to the spot you want to work on.

In all cases there is a full description of what keys you need to use to operate the program at the bottom of each screen display.

There are two functions that you will perform that relate to the Apple computer rather than this software in particular:

To re-boot (start up from scratch) : Press and hold down together the control and open-apple keys, and keeping them down hit the reset key (just above the 5 & 6 keys and marked with a triangle facing left). Hold the control/open-apple keys down until you see the program start to boot. Re-boot should only be necessary if the system has crashed or is showing serious signs of ill health (for example see note in section 2 - option A. description).

The other sequence is used to access the control panel and this is described fully in the following pages.

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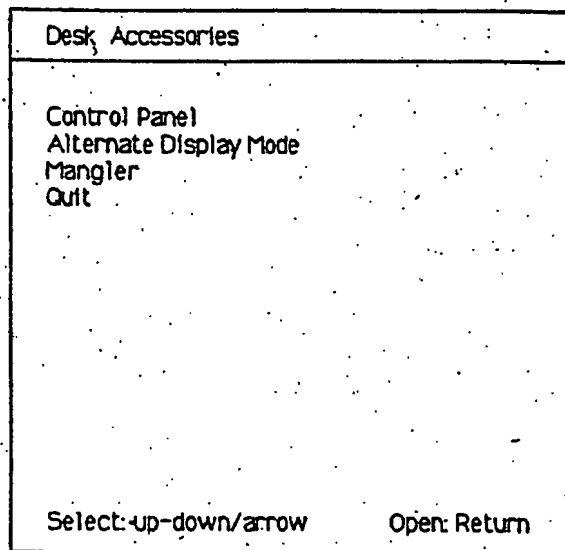
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THE CONTROL PANEL

The control panel is that part of the software that sets up the hardware specifications for the system. You should only need to use this function if you wish to change or check the computer's internal time clock, or if the on board battery stops working (average life 3 -5 years).

When a system is installed this panel should be setup for you, but since the system won't work unless all of this is correct, the following pages show all functions and the correct settings.

To get into the control panel press and hold down together the control and open-apple keys, and keeping them down hit the escape key (esc). Leave the control/open-apple down until you see the panel instructions appear.



Keying : Control - ⌘ - Esc : displays the Desk Accessories menu.

The Control Panel option will be illuminated.

None of the other options listed here affect the Computa Game program, and they should never be touched.

Press return to enter the control panel.

Alternative Entry to the Control Panel :

It is also possible to enter the control panel by pressing and holding down the control and option keys, then pressing the reset key.

This method of entry need only be employed if the Control Panel "Display" option shows you that the system is operating at 60 hertz.

The system should be set to 50 hertz, and this can be done selecting option 3 (the 50 Hertz field) and pressing return.

This method is not the normal access to the control panel, as it causes the system to re-boot when you "quit". There is nothing wrong with this but it takes quite a bit longer if, for instance, you only wanted to correct the clock for daylight saving.

- 1 = Enter the control panel.
- 2 = Set system standards and 60 hertz.
- 3 = Set system standards and 50 hertz.
- 4 = Continue restarting the system.

Press 1,2,3 or 4 to continue

Screen Display after keying : Control - Option - Reset.

PLEASE NOTE :

Options 2 or 3 (above) will automatically reset the entire control panel to factory default settings and the desired 50 or 60 hertz.

They overwrite the settings for all the other options that are required to make the Computa Game program work and it will be necessary to set them again afterwards.

Once into the control panel you will see a list of options as displayed below. Each of these must be set correctly for the Computa Game software to run.

Use the ↑ and ↓ keys to select the options, and the ← and → keys to change the settings.

In the next few pages the correct settings are displayed, and should you ever have to reset these options, copy the settings shown here.

Control_Panel

Display
 Sound
 System Speed
 Clock
 Options
 Slots
 Printer Port
 Modem Port
 Ram Disk
 Quit

1:45:21 PM
26/6/89

Select: (up,down,->,<-, arrow)
Open: Return

The Control Panel Menu Screen

Control_Panel

Display

✓ Type: Colour
 ✓ Columns: 80
 - Screen Colours -
 ✓ Text: White
 ✓ Background: Medium Blue
 ✓ Border: Medium Blue
 ✓ Standards: Yes
 - Hertz 50 -

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Display option screen

Control_Panel

Sound

✓ Volume: [-----*-----]
 ✓ Pitch: [-----*-----]

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Sound option screen

Control_Panel

System Speed

✓ System Speed Fast

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The System Speed option screen

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Control_Panel

Clock

Month: 6 1:45:21 PM
Day: 26 26/6/89
Year: 89
Format: DD/MM/YY

Hour: 1 PM
Minute: 45
Second: 21
✓ Format: AM-PM

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Clock option screen

Control_Panel

Options

✓ Display Language: U.S.A.
✓ Keyboard Layout: U.S.A.
✓ Keyboard Buffering: No
✓ Repeat Speed |-----*-----|
✓ Repeat Delay |-----*-----|
✓ Double Click |-----*-----|
✓ cursor flash |-----*-----|

- Advanced Features -
✓ Shift Caps/Lowercase: No
✓ Fast Space/ Delete Keys: No
✓ Dual Speed Keys: Normal
✓ High Speed Mouse: Normal

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Options option screen

Control_Panel

Slots

✓ Slot 1: Printer Port
✓ Slot 2: Modem Port
✓ Slot 3: Built In Text Display
✓ Slot 4: Mouse Port
✓ Slot 5: Smart Port
Slot 6: Your Card
✓ Slot 7: Your Card

✓ Start-up Slot: Scan

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Slots option screen

Control_Panel

Printer_Port

✓ Device connected: Printer
✓ Line Length: Unlimited
✓ Delete First LF after CR: No
✓ Add LF after CR: Yes
Echo: No
✓ Buffering: No
✓ Baud: 9600
✓ Data/Stop Bits: 8/1
✓ Parity: None
✓ DCD Handshake: No
✓ DSR/DTR Handshake: Yes
✓ XON/XOFF Handshake: Yes

Select: (up,down,->,<-, arrow)
Cancel: Escape Save: Return

The Printer Port option screen

Control_Panel

Modem_Port

- Device Connected Modem -

✓ Line Length: Unlimited

✓ Delete First LF after CR: No

✓ Add LF after CR: No

✓ Echo: No

✓ Buffering: No

✓ Baud: 1200

✓ Data/Stop Bits: 0/1

✓ Parity: None

✓ DCD Handshake: Yes

✓ DSR/DTR Handshake: Yes

✓ XON/XOFF Handshake: No

Select: (up,down,->,<-, arrow)

Cancel: Escape Save: Return

The Modem Port option screen

Control_Panel

Ram_Disk

Minimum Ram Disk Size: OK

Maximum Ram Disk Size: OK

-Largest Selectable- 1024K

-Ram Status-

Ram Disk Size: OK

Total RAM In Use: 660K

Total Free RAM: 619K

Select: (up,down,->,<-, arrow)

Cancel: Escape Save: Return

The RAM Disk option screen

Please Note:

The Control Panel displays are determined by the system firmware (ROM's) contained within the Apple II GS computer itself. These displays therefore, may vary from the examples shown above: according to the particular version of firmware installed by Apple Computer Inc. at the time of manufacture of the computer in question. The firmware version is stated on the last line of the first screen displayed during boot or re-boot (see page 1.1). Note the example shown below of the correct "RAM Disk" option display screen for a II GS with Version 3 firmware. The point being that the "RAM Disk" is set to 0K for Computa Game.

Control_Panel

Ram_Disk

✓ Select RAM Disk Size: OK

-Largest Selectable- 1152K

-RAM Status-

RAM Disk Size: OK

Total RAM In Use: 754K

Total Free RAM: 653K

✓ Resize after Reset NO

Select: (up,down,->,<-, arrow)

Cancel: Escape Save: Return

The RAM Disk option screen.
(For a II GS with Ver. 3 ROM's)

A. Start/Stop/Monitor Network.

This function puts the computer on-line to the rest of the network.

This function also allows you, whilst the computer is on-line to the network, to monitor figures pertinent to poker machine usage across the network generally, as well as the facility to monitor current activity of the meters on a specific machine.

- To start/stop or monitor the network : select A and press return.

You will see the following screen display :

6

METERS	SINGLE MACHINE MONITOR MACHINE NUMBER: XXXX		PROGRESSIVE TOTALS ALL MACHINES
	Meter Values	Increment	Accumulation Today
Credits Played			\$
Credit Won			\$
Coins In			\$
Credits Paid-out			\$
Games Played		Av:	No
NETWORK USAGE	PRN STAT		PROVISIONAL NETT \$
Total Players	PRN 1:		Nett - 15 mins \$
Members	PRN 2:		Nett - 30 mins \$
Visitors	PRN 3:		Nett - 45 mins \$
Other Cards	PRN 4:		Nett - 60 mins \$

Press 6-S to Start/Stop Network, <> to lock/unlock Screen number keys then <ret> to select machine.
<esc> for Main Menu.

The Start/Stop/Monitor screen display format

- Key 6-S To Start or Stop the network.

When the network is running you will see a flashing apple symbol (6) in the top left corner of the screen display. (Should the apple symbol cease to flash but remain on : see Note 1.-"Hung Network" following.)

Having started the network the relevant figures will be displayed as they accumulate.

- Press the space bar to freeze the display.

If for example you wanted to copy down a set of figures, whilst the network was running, and didn't want the screen constantly updating whilst you were doing so. The space bar acts as a toggle for this facility.

- To Monitor a specific machine :

Pressing any of the numeric keys causes the following to be displayed in the centre of the monitor screen :

New Machine to Monitor = _

- Enter the "Unit No." of the desired machine, using the numeric keys, then press return. The "Unit No." is the Dipswitch number of the poker machine unit : see Section "H. Configure Scanner Stations : Install / View Scanner Setup".

The meters of the relevant machine will then be displayed in the monitor screen. For further information see the monitor screen field definitions following.

- Press 'escape' to return to the Main Menu.

The computer will allow you to interrupt the network while it is running to access the membership option on the main menu :

- The 'escape' key returns you to the main menu, and provided your password will allow you into membership, this option will then be underlined and accessible.
- You will notice the apple symbol (6) flashing in the top left corner of the screen and this indicates that the network is still running (see Note 1 following).
- When using the system under interrupt, be careful to allow the computer enough time between each keystroke to respond to your commands. Most of the computer's time is used to keep the network running, so it will appear sluggish when operating in this mode.

Monitor Screen : Field Definitions :

METERS :

The various meter classifications for poker machines. Relevant to the values displayed in the "Single Machine Monitor" and "Progressive Totals" fields.

SINGLE MACHINE MONITOR :

As described above, this field is accessed by pressing any number key followed by entry of the "Unit No." (Dipswitch No.) of the machine you wish to monitor. The actual meter values are then displayed, along with the meter increments since monitoring started, for the machine whose "Unit No." is displayed in the field heading. The increments are displayed as the number of coins, with the Stroke value being the calculated average of turnover hits per play.

If the "Unit No." entered does not exist, in terms of machines on the network, then all values in the Single Machine Monitor field are displayed as rows of asterisks (*****).

PROGRESSIVE TOTALS :

The progressive total, in dollars, for all poker machines, since the last archived meters.

The dollar values are relative to the meter classification shown in the Meters field, except for Stroke which is of course not a dollar value but numeric. If the meters are now archived automatically at the end of each day, the values displayed represent progressive totals for the day. For archiving see "E : Set Poker Machine Parameters // Set Archive Times".

NETWORK USAGE :

The Computa Game network is constantly being polled by the computer. Each one of these polls takes less than 3 seconds and reads the complete set of meters of four poker machines, so for example if an installation has forty poker machines then each machine has its meters read every tenth poll. If there has been a change in meter values from one poll to the next then that machine is deemed to be in use and the usage classified as following :

Total Players : The total number of machines presently in use.

Members : The total number of cards inserted, in the system, whose number falls in the 'membership' range (ie. have a fifth digit of 0,1,2, or 3).

Visitors : The total number of cards inserted that have a fifth digit of 6 or 7.

Other Cards : The total number of cards inserted that have a fifth digit of 4,5, or 9, ie. staff cards.

PRN STAT :

Printer Status : Indicates the status of the docket printers on the network.

Each printer is indicated as : ↑ = Up ie. online and operating,
 ↓ = Down ie. there is a problem with this
printer,

 = Non-existent ie. no printer installed at this
station.

Up to four docket printers can be installed on the network to print Jackpot and Cancel Credit verification vouchers. You can determine which printer the Jackpot and Cancel Credit vouchers, generated for a particular poker machine, will be printed to : see section "H. Configure Scanner Stations // Define Scanner Group Names // Machine ID". For further explanation and examples of these vouchers see Section 3 of this manual.

Please Note : If an assigned docket printer is Down or Non-existent the vouchers directed to this printer will be placed in a queue, to be printed as soon as printer is back on-line (or Up). The computer will Beep at you every time this happens. It is important that you attend to problems of this nature because the voucher queue, for each of the printers, will only hold 100 vouchers. Once the queue is full, further queueing will result in the vouchers at the head of the queue being progressively overwritten and lost.

PROVISIONAL NETT \$:

Is a visual dollar value estimate of current nett takings (on the network), since the last archived meters. The figure displayed is based on Coins In - Credits Paid-out. Since meters will now normally be automatically archived every evening, this represents an estimate of current "Nett" for the day.

Nett 15 Mins :

Nett 30 Mins : etc.

The timed Nett figures are displayed to allow you to judge recent performance on your machines and are defined broadly as the estimated provisional nett for each of the four most recent fifteen minute periods. These figures are updated every fifteen minutes beginning from when the network was started, so for example : if the figures have just been updated, the "Nett - 15 Mins \$" figure will display the provisional nett for the period which ended fifteen minutes ago (ie. the period between thirty and fifteen minutes ago).

Note 1 : "Hung Network".

As described beforehand the presence of the flashing symbol in the top left corner of the screen indicates a running network. Should this symbol cease to flash but remain on : this indicates that the network is hung because the computer cannot complete a poll, furthermore that the computer will not respond to the keyboard.

The most usual cause of this is the system printer, so to determine this :

- Check to ensure the printer is selected (online) and is not out of paper or jammed.
- If the above is not so, the printer may have become confused so turn it off...wait 15 sec. or so then turn it back on and select it.
- If a result is not yet evident, disconnecting the printer data cable will determine whether the printer is at fault.

Should the above be unsuccessful the system must be re-booted, and should the problem persist then a service call to Computa GameP/L. should be placed.

Note 2 : "Stopped Network".

Should the network stop running for no apparent reason (as indicated by the loss of the flashing apple symbol) a likely cause may be an overflow in the meter changes file. In this case a meter changes report must be printed before the network can be restarted. See "J.Access Data Base Options // Print Changes to Poker Machine Meters" for further information.

Note 3 : "Beeping Console".

If the computer beeps at you regularly for no aparent reason it may be that one of the network docket printers is down or that the Jackpot/Cancel Credit voucher output of a poker machine/s has been assigned to a printer that does not exist. This situation should not be ignored : see monitor screen field definition "PRN STAT" preceeding.

B. Set System Master Parameters.

The master parameters options determine what players may use the system, when they can play and what mode of promotion will be operating while they are playing.

- To set the system master parameters: select B and press return.

The Master Parameters menu will be displayed as follows:-

Set-up Master Timetable

Set Active Year Numbers

Block-Set Card Values

- Select an option using ↑ or ↓ and press "return", or "esc" to return to the main menu.

Set-up Master Timetable

Session	Times (24 Hr)		Computa Gold		Cash Register		Poker Machine
	Start	Finish	Uses/Session (1..99)	Mode (1..2)	Uses/Session (1..99)	Mode (1..3)	Mode (1..3)
0	-----	-----	-----	-----	-----	-----	-----
1							
2							
3							
4							
5							
6							
7							
8							
9							

The Master Timetable Screen -(prior to the entry of any information)

The master timetable is the key function around which all the Compu Game promotional features are built. It independently controls the operation of the Compu Gold machine, the Cash Register discount values, and the Poker Machine bonuses.

There are seven master timetable screens available : one for each day of the week.

To enter information in any of these screens :

- Key | or | To select the timetable screen for the day you want (the day name is displayed above the screen).
- Key ←, →, or ↵, To change fields (move the cursor around the timetable).
- Key ← or → To move the cursor within a field.
- To delete or correct an entry, move the cursor using ← or →, and either space out the error or type over it with the new information.
- Key "esc" To return to the Master Parameters menu.

If any information is incorrectly entered the computer will beep and the cursor will automatically highlight the problem area.

Master Timetable : Field Definitions

SESSIONS:-

Each session has its own start and finish times and defines the period of time that will apply to the parameters set out under the Compu Gold, Cash Register, and Poker Machine headings.

There can be up to 9 sessions per day plus one session to overlap one day to the next, if required.

Session times must use a 24 hr. clock for example 9.00am = 0900, 5.35pm = 1735.

The finish time of any session must equal or be less than the start time of the next session.

Gaps can be left between the finish time of one session and the start time of the next if you wish, and these periods will be considered to be "NOT ACTIVE" sessions by the Computa Gold and Cash Register units, and zero promotion sessions by the poker machine units.

Cards will not be accepted at any device (for promotional rewards) during "NOT ACTIVE" sessions, and the time of the next "ACTIVE" session will be displayed to the player. A zero promotion session will accept a card in the normal manner, but will not pay any promotional incentives.

DITTO (") SIGNS:-

Sessions can be continuous for one category and broken for another. If the finish time of one session is the same as the start time of the next, a ditto (") sign can be placed in both the uses/session and mode columns under the previous settings for a category to indicate that the session marked by these " signs is a continuation of the same session.

USES/SESSION:-

This column controls how many times a card can be used during that session for the Computa Gold and Cash Register devices. There is no limit to the number of times a card can be used in a poker machine unit. To determine the number of uses you desire for each session : type the number (between 1-99) in the session row under the appropriate uses/session column.

It is normal to only allow a player one use per session for the Computa Gold machine, and virtually unlimited uses of the Cash Register discount unit.

The feature becomes useful if you want to give away discounted drinks (Happy Hour) and limit the promotion to a set number of purchases per member per session.

MODE:-

The "Mode" controls the activity of each device during the session and is set up independently in the main menu options C, D, & E.

Mode determines how many tickets the Computa Gold issues, what level of discount will apply to the cash registers and how many bonus points will be given away for poker machine play.

There are two modes for the Computa Gold (1 & 2), and three modes for both the Cash Register and Poker Machine units (1, 2 & 3). To select a mode of operation for any device : type the number 1, 2, or 3 in the session row under the appropriate category column.

You can also determine whether random bonuses will be active or not in that session by placing the letter "A-D" after the mode number.

Random bonuses are fully explained in section "F. Set Random Bonus Parameters".

Bonus cash can be activated during any poker machine session by adding the letter "S" after the mode number for that session.

Bonus cash is fully explained in the section "E. Set Poker Machine Parameters".

Points, random bonuses, and bonus cash, can all be active at the same time during any particular session.

MODE NUMBERS for points, screen display prizes, and ticket issue.

There are two modes for the Computa Gold (1 & 2), and three modes for both the Cash Register and Poker Machine units (1, 2 & 3). To select a mode of operation for any device: type the number 1, 2 or 3 in the session row under the appropriate category column. This will cause the units to perform as determined in section "E. Set Poker Machine Parameters/Set P/M Bonus Parameters". The mode number for poker machines also determines the distribution parameters for Screen Display bonuses.

Mode Numbers are fully explained in Section "E". Set Poker Machine Parameters", of this manual.

MODE LETTERS A-D for random bonus distribution.

You can also determine whether random bonuses will be active or not in that session for Computa Gold and Poker Machines by placing A, B, C, or D after the mode number. Any combination or one or more bonuses can be activated per session in addition to the mode numbers. As a bonus A-D is selected it will cause a number (as specified in section "F. Set Random Bonus Parameters/Setup Random Bonus Timetable) of those bonuses (determined by section "F. Set Random Bonus Parameters/Design C/G, C/R & P/M Bonus Screens) to be distributed at random during that session. Only those bonuses selected by letter will be active during that session, and in this manner it is possible to have Bonus A active during one session and bonus C active in another. Mode letters A-D but must be accompanied by a mode number 1-3.

Random Bonuses are fully explained in section "F. Set Random Bonus Parameters", of this manual.

MODE SYMBOL (\$) for bonus cash

Bonus cash can be activated during any poker machine session by adding a \$ after the mode number for that session. This symbol can be added in addition to mode letters A-D but must be accompanied by a mode number 1-3.

Bonus Cash is fully explained in Section "E. Set Poker Machine Parameters" of this manual.

Points, Screen Bonuses, Random Bonuses and Bonus Cash can all be active at the same time during any particular session. Sessions which are left blank will be assumed to be promotionally inactive and no incentives will be distributed during these sessions.

Below is an example of a days promotional parameters.

Set System Master Parameters\\ Setup Master Timetable

Tuesday

Session	Times (24 Hr)		Compu Gold		Cash Registers		Poker Machine
	Start	Finish	Uses/Session (1..99)	Mode (1..2)	Uses/Session (1..99)	Mode (1..3)	Mode (1..3)
0	-----	-----	-----	-----	-----	-----	-----
1	1000	1230	1	1	99	-----	-
2	1230	1330	-	-	-	-	2
3	1330	1630	1	1	2	1	1 B
4	1630	2330	-	-	99	-	1\$ B
5	-	-	-	-	-	2	2
6	-	-	-	-	-	1	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-

Warning: Changing timetable may affect other existing parameters.

In this example the Computa Gold is running two sessions for the day, one from 10am to 1:30pm, and the second from 1:30pm to close at 11:30pm. Players are only allowed to use their cards once during each session, but anyone using the machine during the first session also had a chance to win a Random Bonus A. Notice how the (*) signs are used to join the session boundaries.

The cash registers have been allowed 99 uses from 10am till 12:30pm, when the discount is set as Mode 1. From 12:30pm to 1:30pm a player can only use the register twice to receive their discount and the discount is set at a different value, mode 2. At 1:30pm no parameters are set at all until 3:30pm, so the cash register will display session inactive for that period. From 3:30pm till close the discount goes back to mode 1, and each card can be used up to a further 99 times.

Poker machines are paying points and screen bonuses as defined by mode 1 from 10am to 12:30pm, points and screen bonuses as defined by mode 2 from 12:30 to 1:30 with the chance to win a Random Bonus B, the same thing from 1:30pm to 4:30pm with bonus cash also operating, and back to parameters defined by mode 2 from 4:30pm to 11:30pm closing.

Similar timetables can be created for each day of the week with parameters varying from day to day if required.

Set Active Year Numbers.

The year number is encoded on the card as the fourth digit (See section on cards).

In addition to identifying whether a card is current or not, it can be used to discriminately allow access to different promotional functions. You may, for instance, decide to issue visitor's cards, and although you want these visitors to win poker machine bonuses, you do not want them to be able to obtain discounts at the bar or to participate in the member's only Computa Gold promotion.

The "Set Active Year Numbers" allows you to decide which series (year) numbers will be accepted at which device. You can have up to 10 year numbers valid at once in every category of equipment, or none, or any particular year numbers you choose for each.

The screen display looks like this...

Current Year Numbers

Machine Type	Year Numbers
	0123456789
Computa Gold	0 4
Cash Registers	01
Poker Machines	0 2

The Active Year Numbers screen display.

Upon entry to the Set Active Year Numbers option the cursor will appear alongside the Computa Gold machine type in the 0 place.

If you hold down the open-apple key and hit S you will see the figure 0 appear in this space. You can select any new year number(s) you wish to set by moving the cursor, using the left or right arrows, to the correct position, and enter it by pressing open-apple/S. You will see the appropriate number appear in the field with every location you select.

To remove a number, move the cursor to the spot and type open-apple/C. In other words, anywhere you stop and press open-apple/S you will activate a category number, and anywhere you stop and press open-apple/C you will deactivate it.

To get from Computa Gold, to Cash Registers to Poker Machines hold the open-apple key down and press the left or right arrows.

If the computer beeps and stays in the "Set Active Year Numbers" option, a mistake has been made and the cursor will automatically go to the field where the error has occurred. Correct the entry, and press escape again to return to the main menu.

In summary :-

- Key 0-S To set the value at the cursor position.
- Key 0-C To clear the value at the cursor position.
- Key ←, or → To move cursor location within the field.
- Key 0←, or 0→ To change fields (Machine types).
- Key 'Esc' To return to the main menu.

Block Set Card Values.

Block	Card Value	Card Numbers		Reset Session/Date	Reset Value	Block Name
		From	To			
1						
2						
3						
4						
5						
6						
7						

The "Block Set Card Values" screen display format.

There are going to be times when you will want to issue cards to non members so that they can play your poker machines and participate in the promotions you are running.

The "Block/Set Card Values" option allows you to set the operating parameters for an entire group of players in one hit. In other words, all cards from this number to that number will be active until this date and everybody in that group will be called "visitor" or whatever.

Another way of using the facility is to issue pre-numbered cards in numerical order and record the number of the last card to be issued each day. In this way cards may be issued as valid for 1 month or valid for 3 months, and after the expiry of the first valid period the "Block Set Card Values" feature can be used to reset any card issued before that date to card value 0.

Field Definitions :

BLOCK :

There are seven separate groups that can be individually set allowing you to set various card groups in advance. i.e.: monthly visitors cards, pending bus arrivals etc.

CARD VALUE :

The card value is entered as a number (0 to 9) where :

- 0 = Card Disabled.
- 1 = Normal benefits of card use apply.
- 2-4 = Digit acts as a multiplier on points/bonuses etc. earned or awarded.

CARD NUMBERS :

The last five digits of the card number/s.

RESET SESSION/DATE :

This must be entered in the format #/DD-MM-YY where # = the timetable session number.

On the first use of a card after its reset parameter is met: the Reset Value replaces the Card Value.

Resetting the card value to 0 does not destroy the records maintained on the use of the cards, so any player wishing to transfer his accumulated bonuses to full membership or extend his playing period can be accommodated.

Alternatively, option "K: Reset Member Files" in the main menu could be used to totally delete all records for those card numbers.

RESET VALUE :

This value (as described under Card Value) is the value that the card will revert to after the expiry of the reset date.

BLOCK NAME :

This is a 10 character text field into which you can enter a name for the block set, for example "Visitor". The block name entered will be used as the "Prefname" on all screen displays where the card is used except where a card number (in the block set) relates to a member file where a "Prefname" has already been set : in which case the file "Prefname" is used.

Please Note :

When you enter this option the values loaded the last time this option was used will be displayed.

Should you wish to edit this screen it is a good idea to print the existing screen for reference, by keying 6-P before you edit, in case the information needs to be re-entered (if those same cards are still in legal use).

If you proceed to alter or add anything you will be prompted with the screen display :

"You are about to Erase a current setting. Do you really mean to do this ? Y/N."

This warning screen will be displayed independently for each Block (line) you edit and your response will tell the computer whether or not it needs to do a Block Set procedure when you exit this screen. A Block Set procedure can take some time, particularly if a large number of cards are involved. If you have proceeded past the warning screen and for example you realise a promotion is due to start and you need immediate control of the computer: to avoid having to re-boot to gain control you can minimise the time factor by setting the card range involved to a very small figure, say 1 card, then when you exit the Block Set will still take place but you will have practically immediate control. You will of course have to return when the time is available to perform the Block Set on the desired card range.

If you are erasing a current setting so that you can re-use those files for new members or visitors: it is good practice to check that those card numbers have also been reset so that any points or bonuses previously won will not be issued to the new players. See section "K. Reset Member Files".

- Exit from this option in the normal fashion by pressing the 'esc' key, at which time any settings made will take immediate effect.

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E. Set Poker Machine Parameters

The Computa Game Poker Machine Unit is used to provide promotional incentives to your poker machine players, and to automatically retrieve data on the use of these machines.

Incentives can be linked to coin-in or coin-out performance, or jackpots (coin drops), as well as being offered on a random basis.

To participate in the game players must insert their card into the unit beside their machine where they will be greeted by their own name and notified of winning events as they occur.

The combination of incentives available covers nearly every form of promotion you can imagine. You can devise your own or choose from a range of proven ideas, samples of which have been provided in section 3 of this manual.

The parameters for the operation of the Poker Machine unit are controlled by the master timetable in conjunction with the following options which you will see on the screen as you enter the "Set P/M Bonus Parameters" option.

Design P/M Interface Screens
Design Cash Centre Screens
Set P/M Bonus Parameters
Set Bonus Cash Parameters
Save Poker Machine Meters
Set Archive Times

The "Set Poker Machine Parameters" option menu display.

Design P/M Interface Screens

There are 15 separate functional responses for which programmable screen designs are provided. These screens allow you to explain to your players exactly what they can win and how to play.

There are a number of "KEY" words that can be used in conjunction with these screens in addition to the words that have been detailed before. The complete list of these words is :

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PREFERNAME

If this word is typed into any screen in such a way as the entire word fits within the boundaries of that screen, the display will substitute the preferred name from the membership file for that player in this place. If no name has been recorded for this player the preferred name from member number 0 will be used instead. In other words HI PREFERNAME becomes HI BILL in actual use.

APPROPRIATE_TIME

If these words are typed (including the underline between them) the display will substitute the time of the beginning of the next active session, or the time of the next valid session for that player, whichever is appropriate.

@

Whenever this symbol is used the age code for that player will be substituted in its place. This code is:

A = 18 - 21 years old	D = 35 - 45 years old
B = 21 - 25 years old	E = 45 - 65 years old
C = 25 - 35 years old	F = 65 + years old

KEY_NO

Whenever you want the actual card number of the player to be displayed on the screen key_no will substitute the last six digits of that number in place of these letters.

IVAL

This word means immediate value. When used with the Poker Machine unit it will cause the value of the points that have been won for a single event to be displayed. ie.; Congratulations prefename you have just won "IVAL" points.

CUVAL

This word means cumulative value. It is used as a method of displaying the total value of a players score ie.: you now have "CUVAL" points.

NEW KEY WORDS

B_CASH_BW

The use of this phrase (Bonus Cash Before Withdrawal) entered as above will cause the current total of a player's bonus cash account to be displayed.

The P/M Interface Screens.

There are 15 separate screens for the Poker Machine Unit.
Below is a list of all these screens, what they do, and their presets.

Screen 1 - Paging Message

The paging message screen is used to notify a player of some special message that applies specifically to them. It is activated from the membership file for each member and is displayed on the first use of the card at any device on the network. If the first network device used is a poker machine unit the message will also be displayed as a player removes their card from the unit. Once the message has been shown it will not be displayed again unless reset. The same Paging Message screen is used for all messages, so it is best to phrase it fairly generally.

The preset screen reads:-

THERE IS A MESSAGE
FOR YOU
PREFERNAME
PLEASE SEE THE
ATTENDANT AT THE
RECEPTION DESK

Screen 2 - Waiting for Session

This screen is displayed with the advertising screens when there are no active promotional sessions in progress. It can be used to explain that the unit is not operational at this time and inform the player of the time of the next "active" session. The preset screen reads:-

SESSION
NOT ACTIVE
PLEASE COME BACK
APPROPRIATE_TIME
FOR YOUR NEXT
CHANCE TO WIN

Screen 3 - Greeting Screen

This screen is also displayed with the advertising screens but while "active" promotional sessions are in progress. It is being constantly rotated .. Greeting screen - Advertisement 1 - Greeting screen - Advertisement 2 - Greeting screen - Advertisement 3 - Greeting screen - Advertisement 1 etc., and this sequence will be interrupted as soon as anyone uses a card.

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The preset screen reads: -

WELCOME TO
COMPUTA GAME
INSERT YOUR CARD
TO PLAY THE GAME
HAVE SOME FUN
PLAY NOW

Screen 4 - Advertisement 1

Screen 5 - Advertisement 2

Screen 6 - Advertisement 3

The advertising screens are in use at all times when the machine is not actually being played. They are there to give you the opportunity of promoting any events that need public notification. Eg. "Bingo every Tuesday 11.00 am - 1.00 pm" etc.

There are no presets for these screens.

Screen 7 - Invalid for Venue

If a card from any other venue is used at this reader it will not pay any promotional bonus at all. It will respond to the card with whatever is written on this screen.

The preset screen reads: -

SORRY
YOUR CARD IS
NOT VALID
AT THIS VENUE
WHY NOT JOIN
THE CLUB NOW?

Screen 8 - Inactive Card Series

Each year the player's card is encoded with a year number that tells the computer that the card is valid for that year. As new cards are issued for the next year the option is available in "Set Active Card Series" to make the old card invalid. A card with an invalid number encoded on it will cause the Computa Game unit to respond with the "Inactive Card Series" screen display.

The preset screen reads:-

YOUR MEMBERSHIP
HAS EXPIRED
PLEASE CHECK AT
THE FRONT OFFICE
THINK OF ALL
THE ADVANTAGES

Screen 9 - Card Value Zero

If a card is lost, or the club wishes to deliberately disable a player's card, the card value for that player is made "0" in the membership file. When this is done the Card Value Zero screen will be displayed when the card is used and no benefits will be paid. The same screen is used when a player forgets their pin number and causes their card to be invalidated by entering an incorrect number five times.

The preset screen reads: -

SORRY
PREFERNAME
YOUR CARD HAS
BEEN DISABLED
PLEASE SEE THE
OFFICE ABOUT IT

Screen 10 - Normal Card In

Each time a card is inserted into the card reader a personal greeting screen can be displayed. This screen shows the player that the computer knows they're there and has logged them in correctly. You can also display any previous points that will represent their starting score, or perhaps explain what they can win if you can fit it in.

The preset screen reads :

HI PREFERNAME
NICE TO SEE YOU
YOUR TOTAL SCORE
IS CUVAL POINTS
PLAY ON AND
KEEP WINNING

If a player inserts their card incorrectly (back to front, upside down, too slow or too jerky), the unit will reject the card with the fixed display :

BAD READI
RE-INSERT CARD

Screen 11 - Bonus points Earned

During most playing sessions points can be won for combinations of coin-in or coin-out performance.

This screen occurs at every occasion where points are won and allows you to explain to the player what he has won and if you like, why. At the same time as the message is being displayed the speaker will beep and the message light will flash, to attract the attention of the player, and continue until the entire message has ended.

The preset screen reads :

CONGRATULATIONS
PREFERNAME
YOU HAVE JUST
WON IVAL POINTS
YOUR SCORE IS
NOW CUVAL POINTS

Screen 12 - Normal Card Out

This screen is displayed as a card is withdrawn from the reader. It can be used to show the player how many points they have at that time, or tell them how to redeem them, or just to thank them for playing.

There is no beeping or light display to accompany this screen.

The preset screen reads :

GOODBYE
PREFERNAME
YOU'VE WON CUVAL
POINTS SO FAR
COLLECT THEM AT
THE CASH CENTRE

Screen 13 - Bonus Available at Card Out

This screen will be displayed as a card is withdrawn from the reader if the player has won a random bonus prize. They may not have noticed the bonus prize as it was awarded and so this screen is provided to remind them that prizes are owing.

It can also be used to show the player how many points they have at that time and tell them how to redeem them, and the unit beeps and the lights flash to make sure you don't miss it a second time.

The preset screen reads :

DON'T FORGET
YOUR BONUS PRIZE
COLLECT IT AT
THE CASH CENTRE
COME BACK AGAIN
SOON PREFERNAME

Screen 14 - End of Session - No Bonus

If a session goes from "Active" to "Not Active" while a player has their card inserted in the reader, points and bonuses will no longer be paid. Depending on the circumstances (club is about to close, or just nothing available at this time) displays can be designed to tell the player that "they may continue to play the poker machine if they like but no more bonuses will be paid", or "go home please". This screen comes without beeps and flashes and will only happen when a session changes to "Not Active".

The preset screen reads :

END OF SESSION!
PREFERNAME
YOU CAN PLAY ON
WITHOUT BONUSES
NEXT SESSION AT
APPROPRIATE_TIME

Screen 15 - End of Session With Bonus

As in screen 14 above a player may be using the machine while the session turns "Not Active". The only difference is that if players have any bonus prizes due to them, this screen can be used to remind them to collect their prize.

Beeps and Flashes accompany this screen display.

The preset screen reads:-

END OF SESSION!
NO MORE BONUSES
DONT FORGET YOU
WON SOME ALREADY
COLLECT THEM AT
THE CASH CENTRE

Changing the P/M Interface Screens

Now that you have some idea of all of these functions you will need to know how to change the displays and set them up the way you want them to appear in your club. When you enter the Design P/M Interface Screens function you will see the following display:-

Screen 1 - Paging Message

Line 1.	CPL:16.	VP: 1.	HP: 1.	Message: THERE IS A MESSAGE
Line 2.	CPL:16.	VP: 2.	HP: 1.	Message: FOR YOU
Line 3.	CPL:16.	VP: 3.	HP: 1.	Message: PREFERNAME
Line 4.	CPL:16.	VP: 4.	HP: 1.	Message: PLEASE SEE THE
Line 5.	CPL:16.	VP: 5.	HP: 1.	Message: ATTENDANT AT THE
Line 6.	CPL:16.	VP: 6.	HP: 1.	Message: RECEPTION DESK

The "Design P/M Interface Screens" option display format (Paging Message screen shown).

- The first screen to be displayed at entry to this function is Screen 1 - Paging Message.
- Key ↑ or ↓ to step sequentially through the available screens.
- The cursor will appear in the Line 1 CPL field at entry to any screen.
- Key ←→ or ←←, to change fields as usual.
- Key ←, or →, to move the cursor about within a field.
- Edit existing entries by typing or spacing over them.
- Key ←D to preview the message display. (this key set functions as a 'toggle').
- Key ←P to print a copy of the above option screen and settings.
- Key "esc" to return to the Poker Machine Parameters menu.

CPL and VP (characters per line and vertical position) : are not used for creating text on the Poker Machine units, because the format for this screen is a 16 character by 2 line Liquid Crystal Display.

HP : means horizontal position and also controls the position of the text on the screen. 1 is full left and 16 is full right.

To design your own screens :

- Use the up/down arrows to step to the screen you wish to design, the various screens will appear sequentially as listed on the previous pages.
- Move the cursor to the Line 1 Message field, leaving the horizontal position at 1, and type in what ever you want up to 16 characters, say "HELLO". You can edit any mistakes by moving the cursor to the error and typing or spacing over it.
- Now hold down the open-apple key and type D and the computer will display what that will look like on the Computa Regista screen : HELLO will appear hard to the left of the top line of the screen.
- Open-apple/D again back to the set-up screen and alter the HP to 5.
- Toggle open-apple/D to have a look and you will see HELLO in the middle of the screen.
- Now move to Line 2 and repeat the process to enter your next line of text.
- Important :
It is important to remember that the player will see these screens as sequences of two line messages, so try to phrase the text so that each two lines make sense by themselves. You can use upper or lower case and most of the symbols on the Apple keyboard. Experiment with the positions and phrasing of the text until you feel ready to write a few of your own.

Design Cash Centre Screens

There are 16 separate functional responses for the Cash Centre for which programmable screen designs are provided. In this way all visual communications can be formatted individually for each venue, and you can dictate the way in which you want your members to use the unit.

As before the same "KEY" words that are used for the Poker Machine unit can be used on the Cash Centre. These are:-

PREFERNAME

If this word is typed into any screen in such a way as the entire word fits within the boundaries of that screen, the display will substitute the preferred name from the membership file for that player in this place. If no name has been recorded for this player the preferred name from member number 0 will be used instead. In other words HI PREFERNAME becomes HI BILL in actual use.

APPROPRIATE_TIME

If these words are typed (including the underline between them) the display will substitute the time of the beginning of the next active session, or the time of the next valid session for that player, whichever is appropriate.

@

Whenever this symbol is used the age code for that player will be substituted in its place.

This code is:

A = 18 - 21 years old	D = 35 - 45 years old
B = 21 - 25 years old	E = 45 - 65 years old
C = 25 - 35 years old	F = 65 + years old

KEY_NO

Whenever you want the actual card number of the player to be displayed on the screen "key_no" (including the underline) will substitute the last six digits of that number in place of these letters.

PTS_BW

Means: points before withdrawal. When this you use this key word (include the underline) the number of points in a players account before any withdrawal process will be substituted. For an example see the "Screen 12 - Credit Points Withdrawal" preset in the following pages.

PT_WDL

For this keyword will be substituted the actual points value entered by a player during withdrawal. It becomes like a *hot screen*. In other words where you use this keyword (include the underline); for anybody using the Cash Centre, the amount of points they want to withdraw will be displayed on the screen as they type them in. For example see the presets for "Screen 12" and "Screen 13" following.

PTS_AW

Means points after withdrawal. When and where this keyword (underline included) is used the Cash Centre screen will display the points balance of the players account after a withdrawal, i.e. should they proceed with the withdrawal of the amount of points they have entered. Eg. see "Screen 13" preset in the following pages.

New Key Words

B_CASH_BW

The use of this phrase (Bonus Cash Before Withdrawal) entered as above will cause the current total of a player's bonus cash account to be displayed.

BC_WDL

If you want to display the amount of the withdrawal on the screen of the Cash Centre as it is printing, this abbreviation of Bonus Cash Withdrawal will cause the value of that withdrawal to be displayed on the monitor. However, a player has no control over the value of the withdrawal as it is determined by "Set Poker Machine Parameters/Set Bonus Cash Parameters - Cash Centre Limit", so the use of this key word will only show a different value from their account total if the Cash Centre Limit is less than their account total.

The Cash Centre Screens.

There are 16 separate screens for the Cash Centre.

The following is a list of all of the screens, their functions, and presets.

Screen 1 - Paging Message

The paging message screen is used to notify a player of some special message that applies specifically to them. It is activated from the membership file for each member and is displayed on the first use of the card at any device on the network. Once the message has been displayed it will not be displayed again unless reset. The same Paging Message screen is used for all messages so it is best to phrase it fairly generally.

The preset screen reads: -

THERE IS A MESSAGE
FOR YOU
PREFERNAME
PLEASE SEE THE
ATTENDANT AT THE
RECEPTION DESK

Screen 2 - Waiting for Session

This screen is only displayed on the Cash Centre when the network itself is not in operation.

The Cash Centre is designed to be on-line in all other circumstances, including "Active" and "Not Active" sessions. While this screen is being displayed the unit will not respond to a card usage at all.

The preset screen reads: -

SESSION
NOT ACTIVE
PLEASE COME BACK AT
APPROPRIATE_TIME

Screen 3 - Greeting Screen

This screen is displayed with the advertising screens at all times while the network is running. It is being constantly rotated .. Greeting screen - Advertisement 1 - Greeting screen - Advertisement 2 - Greeting screen - Advertisement 3 - Greeting screen - Advertisement 1 etc., and this sequence will be interrupted as soon as anyone uses a card.

The preset screen reads: -

COMPUTA
CASH CENTRE

INSERT YOUR CARD
TO
COLLECT YOUR BONUSES

Screen 4 - Advertisement 1

Screen 5 - Advertisement 2

Screen 6 - Advertisement 3

The advertising screens are in use at all times when the machine is not actually being played. They are there to give you the opportunity of promoting any events that need public notification. Eg. "Bingo every Tuesday 11.00 am - 1.00 pm" etc.

There are no presets for these screens.

Screen 7 - Invalid for Venue

If a card from any other venue is used at the Cash Centre it will not be allowed access to the network. It will respond to the card with whatever is written on this screen.

The preset screen reads: -

SORRY
YOUR CARD IS
NOT VALID
AT THIS VENUE

Screen 8 - Invalid Pin Number

Every card has an associated PIN number.

This number is preset to four zeros (0 0 0 0) for valid unused cards, but a player can change their number by first entering their existing pin, typing "CLEAR" and then typing in another set of four digits and hitting "ENTER".

If someone forgets their pin number, and enters an incorrect pin this screen display can be used to tell them their number is wrong. If the wrong number is used more than five times consecutively, the card will automatically be invalidated, and will not work again until revalidated by the club.

The preset screen for this message is: -

WRONG PIN NUMBER
PLEASE TRY AGAIN

Screen 9 - Card Value Zero

If a card is lost, or if the club wishes to deliberately disable a player's card, this can be done by making the card value for that player "0" in the membership file. If this is done the card will no longer entitle the player to any benefits and so this screen will be displayed.

The same screen will be used when a player forgets their pin number and causes their card to be invalidated by entering an incorrect number more than five times.

The preset screen reads: -

SORRY
PREFENAME
YOUR CARD HAS BEEN
DISABLED
PLEASE SEE THE
OFFICE ABOUT IT

Screen 10 - Nothing Pending

The Cash Centre can be used at any time when the network is running to check scores or withdraw bonuses. That doesn't mean that there is always something due to a player and in those cases where nothing is due this screen will be used.

The preset screen reads: -

HELLO
PREFENAME
THERE ARE NO POINTS
OR BONUSSES FOR YOU
AT THE MOMENT
HOPE YOU WIN SOME SOON!

Screen 11 - Random Bonus - Tickets printing

If random bonuses are due to a player, they are automatically paid in full as soon as a valid pin number is entered. A separate ticket is issued for each bonus pending, and the machine will continue to print tickets until all bonuses are paid.

The preset screen that is displayed while the tickets are being printed reads: -

GOOD ON YOU
PREFENAME
YOU HAVE WON A
BONUS PRIZE
YOUR TICKET IS
NOW PRINTING

Screen 12 - Credit Points Withdrawal

After any bonuses have been paid and if the player has accumulated some points on the system, the total value of this score will be displayed. At this stage they can elect to keep the points in their account and simply withdraw their card or make a withdrawal. To withdraw points a player must type the number of points they wish to redeem while this screen is being displayed and press "ENTER".

The preset screen to describe this function is :-

YOU PRESENTLY HAVE
PTS_BW COMPUTA POINTS
TYPE THE NUMBER YOU
WANT TO WITHDRAW
THEN PRESS <ENTER>
WITHDRAWING:-
PT_WDL

Screen 13 - Withdrawal Confirmation

As soon as the player has entered the amount they wish to withdraw the Cash Centre will display this next screen to confirm that no mistakes have been made before it actually debits their account for this amount.

At this stage they can simply press enter again to proceed or clear to abort the transaction.

- Enter takes them to screen 14,
- Clear takes them back to screen 12.

The preset screen reads: -

YOU ARE WITHDRAWING
PT_WDL COMPUTA POINTS
MAKING YOUR NEW BALANCE
PTS_AW
PRESS <CLEAR> TO
CANCEL OR <ENTER>
TO PROCEED

Screen 14 - Take Card with Tickets

When the points withdrawal ticket has been printed this screen will be displayed to inform the player that his ticket has been printed and not to forget to remove his card.

The preset screen reads: -

YOUR TICKET IS
PRINTING NOW

Screen 15 - Take Card Without Tickets

If a player elects not to withdraw any points, they can escape from the system by simply removing their card, or they can in fact go through the motion of withdrawing 0 points by pressing enter for screen 12 and 13 without nominating any withdrawal amount. In fact this hardly ever occurs but if it does this screen will appear: -

DONT FORGET
YOUR CARD
PREFERNAME

Screen 16 - Goodbye Message

The goodbye message will be displayed to a player at any time during the transaction after the correct pin number has been entered, if they remove their card.

The preset screen reads: -

GOODBYE
PREFERNAME
SEE YOU
NEXT TIME

Changing the Cash Centre Screens

Now that you have some idea of all of these functions you will need to know how to change the displays and set them up the way you want them to appear in your club.

When you enter the Design Cash Centre Screens function you will see the following display:

Screen 1 - Paging Message

Line 1.	CPL:10.	VP: 9.	HP: 3.	Message:THERE IS A MESSAGE
Line 2.	CPL:10.	VP:22.	HP: 13.	Message:FOR YOU
Line 3.	CPL:20.	VP:37.	HP: 10.	Message:PREFERNAME
Line 4.	CPL:20.	VP:50.	HP: 8.	Message:PLEASE SEE THE
Line 5.	CPL:20.	VP:64.	HP: 6.	Message:ATTENDANT AT THE
Line 6.	CPL:40.	VP:78.	HP: 10.	Message:RECEPTION DESK
Line 7.	CPL:40.	VP:89.	HP: 1.	Message:

The "Design Cash Centre Screens" display format (Screen 1 preset shown).

- The first screen to be displayed at entry to this function is Screen 1 - Paging Message.
- Key ↑ or ↓ to step sequentially through the available screens.
- The cursor will appear in the Line 1 CPL field at entry to any screen.
- Key ←→, or ←←, to change fields as usual.
- Key ←, or →, to move the cursor about within a field.
- Edit existing entries by typing or spacing over them.
- Key ←D to preview the message display (this key set functions as a 'toggle').
- Key ←P to print a copy of the above option screen and settings.
- Key "esc" to return to the Poker Machine Parameters menu.

CPL : refers to how many characters per line you want on that line.

You can only select 10, 20, or 40. If you select any other number the computer will beep at you and the cursor will return to the problem area. 10 CPL creates very large text - 40 CPL very small. A line is deemed to take up the entire width of the screen. 10 CPL creates characters big enough so that 10 of them fill that entire line, 20 CPL means you can type 20 characters in the same space, and 40 CPL means you can type 40 characters.

VP : means vertical position and controls the position of the text on the screen (1 is the top and 90 is the bottom).

HP : means horizontal position and also controls the position of the text on the screen (1 is full left and 40 is full right).

To design your own screens:

- Decide which of the screens you want to design and step to it using the ↓ or ↑ keys. The screen number and name appear on the top line of the display and the different screens will appear in the same sequence as that listed on the preceding pages.
 - Start at line 1, select a character size, say 10 CPL; move to the next field select your vertical position, say 10; move to the next field select your horizontal position, say 2; move to the next field and type in what ever you want up to 10 characters, say "HELLO". To edit existing text position the cursor over the text and type over it with new text or spaces.
 - Now hold down the open-apple key and type D and the computer will display what that will look like on the Computa Gold monitor. HELLO will appear up the top but to the left of the centre of the screen.
 - Open-apple/D again back to the set-up screen and alter the HP to 11. Toggle open-apple/D to have a look and you will see HELLO in the middle of the screen a little down from the top. Try experimenting with the character sizes and positions with just this one word and get the "feel" of what you can do with these screen displays. Don't forget you can use * _ # | = + () or anything else available on the keyboard to help decorate the screen if you wish.
 - Now move to Line 2 and repeat the process to enter your next line of text.
- You will get much quicker at this as you go along and it is worth practising a bit until you feel confident. You can in fact design quite attractive screen displays, and remember that this is the first thing players will see when they use the system.

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Set P/M Bonus Parameters.

When you enter the Set P/M Bonus Parameters option you will see this screen in front of you:

	Mode 1	Mode 2	Mode 3
Promotion Basis	\$ Value 1-9999	Bonus 1-99	\$ Value 1-9999 Bonus 1-99
Coins-In/Sess			
Coins-In/Prom			
Coins-Out/Drop			
Coins-Out/Sess			
Coins-Out/Prom			
Name of Promotional Points	(14 character space.)		
Use Bonus Cash Drop Range(s)	No		

The Poker Machine Bonus Parameters option screen display.

When you first enter this screen the cursor will appear in the dollar value coins-in/sess field for Mode 1. The normal open-apple/left-right arrows will get you from field to field. Values can be entered in all fields for every mode if you wish to have several styles of points based incentives operating concurrently. However if you enter a dollar value for one basis of promotion you must also enter the number of points to be given away or the computer will beep and illuminate your error when you try to escape from the screen.

Set P/M Bonus Parameters: Field Definitions

Promotion Basis There are five separate bonus parameters listed under "Promotion Basis" that you can select for each mode of operation. Remember modes are linked to the master timetable so that each mode can be made to happen at different times of the day or week (see option "B. Set System Master Parameters // Set Up Master Timetable // Mode", and the promotional examples in section 3).

Value and Bonus The other headings "Value" and "Bonus" refer to the dollar value of the coins invested in a poker machine before a bonus is issued and the number of points that will be issued for that value.

The system automatically compensates for 5c, 10c, 20c, \$1, and \$2 machines, so that dollar value really means the amount of money, not the number of coins.

Coins-In /Sess Means coins-in per playing session. Points are to be given away for coins played since the card has been inserted. If a card is removed and re-inserted either in the same machine or in another, the player must accumulate the appropriate dollar value from scratch again before attaining their point/s.
Example:- 1 point for every \$5.00 played : If only \$4.80 is played and the card is removed, when the card is re-inserted the full \$5.00 must be played again before the point will be awarded.

Coins-In /Prom Means the points will be given away for any coins played and all accumulated coins played will be taken into account in calculating the appropriate dollar value before attaining their point/s whether or not a card is removed and re-inserted during play. Example:- 1 point for every \$5.00 played: If only \$4.80 is played and the card is removed, when the card is re-inserted only 20 cents needs to be played before the point will be awarded.

Coins-Out/Drop If you decide to pay points based on winning poker machine combinations, the coins-out per drop feature allows you to select the dollar value of the win before points will be awarded.
Example:- 10 points for every drop of \$5.00 : If someone wins a drop of 50 coins on a ten cent machine they will win 10 points; If the drop is less than 50 coins they get nothing and if they win a drop of 75 coins they still get 10 points; 100 coins wins 20 points etc. until they get to the automatic cut off value of \$250.00 after which no bonuses will be paid.

Coins-Out/Sess Points can also be paid on the dollar value of accumulated payouts.
Example :- a drop of 2 coins on a ten cent machine + a drop of 10 coins + 2 coins + 25 + 18 = 57 coins which would have paid points if the \$ value had been set to \$5.00.
Coins-Out/Sess means that these wins will only be accumulated while a player has their card in the machine. If they take it out and put it back in they start accumulating their wins from 0 again.

Coins-Out/Prom This is the same as Coins-Out/Session except that pays on wins will continue to accumulate towards bonus points even if a card is removed and a player comes back 6 weeks later to play.
Example:- 10 points for every \$5.00 total winnings : A player wins a drop of 10 coins + 25 + 2 + 5 = 42 coins, goes away for a holiday and comes back, after which they only need to win another 8 coins to receive their 10 points.

Name of Promotional Points : This field allows you to change the name of the points that your players accumulate. They will be called "Computa Points" in their default setting, but you can call them Dazzle Dollars, or Casino Chips" if you would like. The only limitation is that the total length of the name cannot exceed 14 characters. Changing this field only affects the name that is printed beside the point value on the ticket that is issued from the Cash Centre. Remember that any other reference to the name of your points will have been made in the Design P/M Interface Screen and Design Cash Centre Screens, and these should all be the same as the name you call the points here.

Use Bonus Cash Range(s) - Yes/No.

This facility lets you associate the Bonus Cash Payout Range settings to set the range limits for Coins-out/Drop. If this position is set to "Yes" then points or screen bonuses will only be awarded if they fall between the upper and lower limits set by the Bonus Cash Payout Range parameters.

SCREEN BONUSES

A Computa Game "Screen Bonus" is an award that can be paid to players directly, according to their performance on a poker machine.

The bonus can be anything at all as long as it can be described in four lines of 16 characters.

There are four screen bonuses A, B, C, & D. These share the same definition with Random Bonuses, so in fact a screen bonus "A" is the same as a random bonus "A" except for the method of distribution.

Screen bonuses can be awarded for on the same basis as points for coins-in/session, coins-in/promotion, coins-out/drop, coins-out/session, and coin-out/promotion. By placing any one of the letters A - D in the bonus column alongside the appropriate promotional basis you will cause that screen to be displayed to the player everytime those parameters are met. Screen bonuses will operate on their own without the need to have points awarded at the same time, and although only one bonus may be awarded for any one promotional basis it is possible to have different bonuses being awarded for different basis in the same mode set-up.

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How often a screen bonus is awarded is determined solely by the number of times card using poker machine players achieve the parameters set. There is a limit of one screen bonus for any single event, so that for instance if you have decided to issue a "Champagne Breakfast" for all drops of \$100 or more, and a player wins a drop of \$500, that player will be awarded only one breakfast.

Below is a Poker Machine Bonus Parameters Screen set up as you might use it.

Mode 1			Mode 2		Mode 3	
Promotion Basis	\$ Value 1-9999	Bonus 1-99	\$Value 1-9999	Bonus 1-99	\$Value 1-9999	Bonus 1-99
Coins-In/Sess	5	2	5	4	5	2
Coins-In/Prom						
Coins-Out/Drop						
Coins-Out/Sess						
Coins-Out/Prom					100	A
Name of Promotional Points Use Bonus Cash Drop Range(s)			Compu Points..... No			

- During all sessions entered as Mode 1 on the master timetable the poker machine units will pay 2 points for every \$5.00 played, allowing the card to be moved from machine to machine without penalty.
- During Mode 2 sessions the unit will pay 4 points for every \$5.00 played.
- During Mode 3 sessions, 2 points will be paid on \$5.00 coin-in as well as a screen bonus "A" being awarded for every drop of \$100 or more on all machines, without using the bonus cash limits.

Set Bonus Cash Parameters.

This screen sets the range for the payouts that are to be doubled.

There are eight categories that can be set, giving you the flexibility to match the paying characteristics of each poker machine to the overall promotional budget you had in mind. This is done in conjunction with the "Install/View Scanner Set-up" part of option "H : Configure Scanner Stations" where you can associate a machine category with a particular poker machine.

When you select the "Set Bonus Cash Parameters" option this is the screen you will see:-

Machine Category	Payout Range Coins	
	From	To
A		
B		
C		
D		
E		
F		
G		
H		
Bonus Cash Limit		\$1..
Cash Centre Limit		\$1..
Bonus Cash Payout		20..

The (P/M) Bonus Cash Parameters option screen.

- Normal key sequences apply to this option.

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Machine Category : The eight categories are preset as the letters A -H.

You cannot change these fixed category definitions because they are used elsewhere in the program to define the range of payouts you want to vary as you have set them in this option.

The reason you need to have so many different categories is because the paying combinations of your poker machines differ greatly and to vary all pays from \$10 - \$25 may be fine on a ten cent machine but would cost a fortune on a \$1 or \$2 machine.

Payout Range :

The cursor will appear alongside "A" in the "From" column when this screen is first displayed.

You can enter any figure from 0 - 9999 coins before moving to the "To" column to set the maximum value payout for that category.

If for example you entered 100 in the "From" column and 500 in the "To" column: the result would be a category that would vary all jackpots or drops from 100 to 500 coins for machines set with that category (regardless of whether they are a 5c, 10c, 20c, \$1, or \$2 machine) by the addition of a bonus cash payout, the size of which is set by "Bonus Cash Payout %".

Normally the payout range settings are strict, in that if someone wins a drop outside the range set no Bonus Cash payment will be made.

Payout Range Clip: However, you can make any of the machine categories 'continuous' by the entry of a "C" after the figure you have entered in the "To" column for that category. This category will now accept and pay bonus cash on coin drops beyond the value set in the "To" column, but pegged to this value in terms of the bonus cash paid. The lower limit set in the "From" column still applies.

Bonus Cash Limit : Normally the start and stop times for bonus cash to be issued will be determined by programming these sessions into the master timetable (using "B" alongside the mode value for that session).

By setting a limit for bonus cash you will be causing the bonus cash session to finish as soon as the limit has been reached. This may be before the actual session has ended depending on the number of payouts and the value of the limit.

If this point is reached the last bonus cash issue will be the one that takes the total value past the limit value. Therefore, in cases where the limit is reached, the value of the bonus cash issued will always exceed the limit value by some small amount.

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Bonus cash sessions do not mean that the maximum value must always be paid, since they can only happen when an appropriate combination occurs on a poker machine, and the maximum value will protect you from going over budget.

Bonus Cash Payout % : This variable affects the degree by which you issue the bonus cash. If the percentage were set to 100%, then a drop of 100 coins on a ten cent machine would be matched by a bonus cash payment of \$10.00. If the percentage is set to 30% the payment would only be \$3.00, or if it was 220% the payment would be \$22.00 for the same drop. Anything from 1% - 250% can be selected, but payments will always be rounded down to the nearest five cents where required. If a payment is calculated as less than five cents it will not be issued.

Cash Centre Limit : Bonus cash tickets are collected from the Cash Centre as are all other bonuses awarded by the system. Every player's bonus cash is accumulated in their file as it is won and so their total cash value to be paid grows with use. As soon as they insert their card into the Cash Centre all accumulated bonus cash will be paid as one total value. Ie. if a player has won a \$5.00 and a \$50.00 in bonus cash, they will automatically receive one ticket with the total value of \$55.00. The maximum ticket value allows you to determine the highest value of any single ticket you want to be printed. So if this limit was set at \$50.00, the player above would have received only \$50.00 with this use of the Cash Centre and would collect the rest the next time he/she used the machine.

The maximum amount of Bonus Cash that can be withdrawn at any one time is \$250.00.

Save Poker Machine Meters

This option saves the meter readings, currently in the computer's memory, to disk.

When you select this option the following warning screen will appear :

DON'T USE this option UNLESS the Host holds
a complete set of valid readings in its memory.

Press <return> to proceed, or <escape> to "Set P/M Parameters".

Saving the poker machine meters is effectively a manual archive of the meter values. If this feature is selected all real time data displayed on the Apple screen when the network is running will be relative to these new values.

The feature can also be used if the current meter values are in jeopardy. An example of this would be a firmware (EPROM) change on the installation's poker machine units, or a battery replacement on board a poker machine unit. In these circumstances, if current meter values were held at the host computer, these values would be automatically transmitted to the unit(s) as soon as power was restored and the network was running.

Set Archive Times

This option allows you to set up automatic archiving of your meter readings.

When you select "Set Archive Times" the following screen will be displayed:

Bank No.	Archive Time
1	
2	
3	
4	

The "Archive Times" option screen format.

- Normal key sequences apply for this option.

Bank No.:

The various poker machines on the network can be divided into up to four groups or banks. The "Bank No." of a poker machine is set by the 9th digit of the "Machine ID" and is concurrent with the "Pm No." of the docket printer that the Jackpot and Cancel Credit vouchers, generated for that poker machine, will be directed to. For "Machine ID" : see "H: Configure Scanner Stations // Define Scanner Group Names".

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Archive Time : The figure in this column sets the time at which the meters of the poker machines assigned that "Bank No." will be archived.

The desired archive time must be entered in 24 hr. format (four digits).

For example : 11.30 pm = 23.30 hrs. (enter 2330)

2.00 am = 02.00 hrs. (enter 0200)

Leave the space blank if no automatic archive is desired for that bank.

- The primary use of these meter archives is as a base figure for the calculation of the "Provisional Net" figures displayed in the network "Monitor" screen.
- There is only one complete set of archived meters, which is time coded. Each successive archive will overwrite (the relevant 'bank' of) this set.
- The disk space used by the Save, Restore, and Archive options is the same. If you wish to view or print the last archived set of meters : use the "Restore Poker Machine Meters" option to bring them into memory, then "J. Access Data Base Options // View Poker Machine Meter Readings" to view/print. Should you do this however no normal (automatic or manual) transfer of data to your club system should be allowed to occur before the network has been started again (so that any data transfer is based on current and valid meters).

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F. Set Random Bonus Parameters.

A Computa Game Random Bonus is a bonus that can be awarded to players directly, without relating to their performance, or the number of times they have used any piece of equipment. It is more or less luck to win a Random Bonus.

The bonus can be anything at all as long as it can be described in four lines of 16 characters.

Random bonuses are given away only during those periods of time when "Random Bonus Active" sessions have been set up in the master timetable (by adding a + sign after the mode number for that session).

How often a bonus is paid is determined by the number of bonuses to be paid and the length of time between the start and stop dates for those bonuses.

The computer then selects the appropriate number of time slots and the first valid person to use the equipment after one of these times has occurred will receive a Random Bonus.

The Set Random Bonus Parameters menu includes the following options:

Setup Random Bonus Timetable
View Random Bonus Status
Design C/G Random Bonus Screens
Design C/R Bonus Screens
Design P/M Random Bonus Screens

The Random Bonus Parameters menu screen display.

- Select an option by using the ↑ or ↓ keys to highlight it and press 'return'.

The various options are described on the following pages.

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Set up Random Bonus Timetable.

This timetable controls how many of each bonus for each type of equipment you will distribute during each appropriate session.

When you enter the Set up Random Bonus Timetable option the following screen will be displayed :

Number of Bonuses per Session
C/G Rnd. Bonus A (1..500):
C/G Rnd. Bonus B (1..500):
C/G Rnd. Bonus C (1..500):
C/G Rnd. Bonus D (1..500):
P/M Rnd. Bonus A (1..500):
P/M Rnd. Bonus B (1..500):
P/M Rnd. Bonus C (1..500):
P/M Rnd. Bonus D (1..500):

The "Setup Random Bonus Timetable" option display screen.

- Upon entry to this screen : the cursor will be positioned in the "Start C/G Jackpots" field.
- Key $\delta \rightarrow$, or $\delta \leftarrow$, to change fields as usual.
- Key \leftarrow or \rightarrow to move cursor about within a field.
- Edit entries by typing over.
- Key $\delta - P$ to print a copy of the above screen.
- Press 'Esc' to exit to the Random Bonus Parameters menu (see note after field definitions).

Field Definitions :

Number of Bonuses this Session

This field determines the maximum number of each bonus that can be given away in any one session. The number can be anything from 1 - 500 of each bonus. If you don't wish to use any particular bonus the safest setting is to leave that field blank. To blank out a field with a previous setting or to change the value of that setting simply type any number. The warning

"You are about to abort current bonus(es). Do you really mean this (Y/N)"

will appear on the screen. Press "Y" to proceed or "N" to cancel. "Y" will cause that field to go blank, after which a new number can be added if required.

There are nine independent Random Bonus Screens - four for the Computa Gold, one for Cash Registers and four for the poker machines. All screens cause the unit to beep and display the description of the prize awarded to player. After the display has been completed, the prize can be redeemed from the Cash Centre at any time in the normal way.

Computa Gold Random Bonuses

There are four separate Random Bonuses for the Computa Gold machine. Any one of A - D bonus screens, or all of them, or any combination of these bonuses can be simultaneously during a session. By placing a number from 1 - 500 next to the appropriate field you are instructing the computer to award that exact number of that bonus(es) during every session which is marked in the master timetable with that bonus letter(s). In other words if a session is marked 1AC in the master timetable, the number of bonus A & C's indicated in this setup timetable will be awarded at random during that session. If you wish to make a particular bonus available during all opening hours then the letter for that bonus will have to be entered into each session for the week. To distribute 300 bonuses for a week, divide 300 by the number of sessions during which this bonus can be won in a week, and enter this number into the Setup Random Bonus Timetable for that bonus.

Cash Register Random Bonuses

There is only one random bonus for cash registers. Selecting this option causes the cash register to issue 50% discount on the entire purchase associated with that card usage. It is activated by typing "A" along with the mode number in any cash register session during which the bonuses are to be distributed.

Poker Machine Random Bonuses

The Random Bonuses for poker machines work in exactly the same way as those above. All bonus numbers entered in this timetable affect the number of bonuses to be distributed during any session marked with that bonus.

Note: After all the parameters have been set, and you press 'esc' to exit this screen - Before returning to the Random Bonus Parameters menu the computer will display:

Please Wait!
Setting up Random Bonuses
may take some time.

as it allocates the bonuses to the correct time slots.

There is an example in section 3 on how to set up an effective Random Bonus timetable.

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View Random Bonus Status.

The Random Bonus Status screen will show you the progress of the issue of bonuses as determined by the Random Bonus timetable at the time of viewing.

For example :

Number of Bonuses as of 2.45 pm 23-7-90

Random Bonuses	To Come	Pending	In Progress	Paid	Cancelled	Total
C/G Rnd. Bonus 1	0	0	0	0	0	0
C/G Rnd. Bonus 2	0	0	0	0	0	0
C/G Rnd. Bonus 3	0	0	0	0	0	0
C/G Rnd. Bonus 4	0	0	0	0	0	0
C/R 50% Discnt A	0	0	0	0	0	0
P/M Rnd. Bonus 1	0	0	0	0	0	0
P/M Rnd. Bonus 2	0	0	0	0	0	0
P/M Rnd. Bonus 3	0	0	0	0	0	0
P/M Rnd. Bonus 4	0	0	0	0	0	0

The "Bonus Status" display screen.

Random Bonuses : Lists all the random bonuses that can be issued.

To Come : This column shows how many bonuses have not been paid during the current session - up till the time and date at the top of the screen.

Pending : If a 'bonus time' has been allocated by the computer but no valid winner has yet been found, the bonus is called 'pending'. This means the next valid player that uses the network will immediately win this bonus.
Bonuses only become pending if there are more being given away than there are people eligible to use the system at that time, (bonuses might be allocated to be paid all day and night for the Compu Gold, but everyone could have already used their cards by 8.00 pm), or if a start time that has been set in the timetable precedes the current time.

- Pending random bonuses can be cleared by keying 6-C.
This will move all pending random bonuses into the cancelled column.

In Progress : is no longer used.

Paid : As a player wins a bonus the computer moves it from "To Come" to "Paid". This column shows how many bonuses have been paid (not necessarily collected at the Cash Centre) at this point in time.

Cancelled : When pending random bonuses are cancelled they are added to this column. If this happens more than once during the parameters of one Random Bonus Timetable the cancelled column will account for all the cancelled bonuses, not just the ones done at the time.

Total : The total column will show the same number of random bonuses as have been allocated by the Random Bonus Timetable. The total of all the other columns will equal this value.

- A printout of the current Random Bonus Status can be obtained by keying 6-P.

Design C/G Random Bonus Screens.

The Compta Gold Random Bonuses are given away to the first valid player to use the machine after a random bonus has become pending. This random bonus is not issued as a ticket, but as a screen display that appears on the monitor of the machine itself for 10 seconds, showing the player what he has won. As soon as the random bonus is displayed a log of the event is printed (on the system printer) noting the time, the player's number, and the type of bonus won, and a record is made in that player's file. To collect this prize, a player must then proceed to the Cash Centre, where a voucher describing the random bonus will be issued; or, where there are no Cash Centres in the system, they must go to a supervisor or authorised person who can check the printout and issue the prize or voucher.

Important : When designing the displays for these random bonuses it is important to remember that a player has only 10 seconds to read it and find out what he should do, so don't make them too complicated or use lots of fine print.

There are four random bonuses (and screens) for Compta Gold : Random Bonus 1, Random Bonus 2, Random Bonus 3, and Random Bonus 4. The same conditions apply for each of these screens.

The screens themselves are set up in exactly the same way as the other screens for the Compta Gold (see "C. Set Compta Gold Parameters" sub option "Design Normal Screens").

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For example :

Screen 21 - Random Bonus 1

Line 1.	CPL:10, VP: 9, HP: 1, Message:
Line 2.	CPL:10, VP:29, HP: 1, Message:
Line 3.	CPL:20, VP:49, HP: 1, Message:
Line 4.	CPL:20, VP:59, HP: 1, Message:
Line 5.	CPL:20, VP:69, HP: 1, Message:
Line 6.	CPL:40, VP:79, HP: 1, Message:
Line 7.	CPL:40, VP:89, HP: 1, Message:

These random bonus screens affect the printing on the voucher that is issued from the Cash Centre. Whatever is typed into lines 3, 4, 5, and 6 will also be printed on the voucher. Anything typed into the other lines (1, 2, and 7), will not.

So in designing these screens you are really designing the Cash Centre voucher as well.

Because the maximum number of characters that can be printed on the Cash Centre docket printer is 16, this is also the most characters you can type into any one line of text. To prevent you from typing a longer phrase the computer will beep and the cursor will return to the horizontal position field next to where the error has occurred. The minimum number that can be entered into this field is 5, meaning that the 16 digits from 5-20 remain in use.

Let's say you want to make Random Bonus 1 a free meal in the carvery.

You could do it this way:-

Screen 21 - Random Bonus 1

Line 1.	CPL:20, VP:10, HP: 5, Message:	CONGRATULATIONS
Line 2.	CPL:10, VP:25, HP: 1, Message:	PREFERRNAME
Line 3.	CPL:20, VP:45, HP: 6, Message:	You have won a
Line 4.	CPL:20, VP:60, HP: 9, Message:	Carvery Meal
Line 5.	CPL:10, VP:70, HP: 2, Message:	Valid till 13th Nov. 1990
Line 6.	CPL:40, VP:90, HP:10, Message:	13th Nov. 1990
Line 7.	CPL:40, VP:89, HP: 1, Message:	

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The player would then see the entire display as they win the random bonus, and printed on the voucher issued from the Cash Centre would be :

You have won a
carvery meal

valid till 13th NOV. 1990

along with: the name of the club,
the time and date of issue,
and the player's name and card number.
See section 3 for an example.

There is one other set of circumstances that should be re-iterated at this stage:

If Random Bonus 1 has a redemption value of say \$5.00 and you decide to change this random bonus to something that has a value of \$25.00. Any player who has previously won a Random Bonus 1, but has not yet collected the voucher from the Cash Centre is still owed a Random Bonus 1 as far as the computer is concerned. If you change this screen, that player will in fact receive a voucher as described by the new screen.

Therefore : Make sure you reset the files (option K in the Main Menu) before changing the value of any particular random bonus.

Design C/R Random Bonus Screens

The Cash Register Random Bonuses are also given away to the first valid player to make a purchase after a random bonus has become pending. This bonus is not issued as a ticket either, but as a display that appears on the screen of the discounting unit for 10 seconds, describing to the player what he has won.

As soon as the bonus is displayed a log of the event is printed (on the system printer) noting the time, the player's number, and the type of bonus won, and the bonus is recorded in the player's file. For an example see this section: "Printed Logs".

Because this bonus is always a 50% discount, or free purchase, no tickets or voucher need to be issued to confirm the event. The discounting unit simply commands the cash register to deduct 50% of the purchase from the bill leaving the other half to pay.

F. Set Random Bonus Parameters

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There is only one cash register Bonus Discount screen and this is set up in the same way as the other screens for the Cash Register Discounting Unit.
(see "D. Set Cash Register Parameters" suboption "Design Normal Screens")

Viz:

Screen 13 - Bonus Discount

Line 1	CPL:16.	VP:1.	HP:1.	Message:
Line 2	CPL:16.	VP:2.	HP:1.	Message:
Line 3	CPL:16.	VP:3.	HP:1.	Message:
Line 4	CPL:16.	VP:4.	HP:1.	Message:
Line 5	CPL:16.	VP:5.	HP:1.	Message:
Line 6	CPL:16.	VP:6.	HP:1.	Message:

In most cases this screen will be facing the barman.
It should be used to explain to him why there is no charge for this purchase.

- The message will flash and the speaker will beep as the display is shown.

Design P/M Random Bonus Screens.

There are four Poker Machine Random Bonus screens, and they are configurable in the same way as the other poker machine unit screens.
(see "E. Set Poker Machine Parameters // Design P/M Interface Screens").

Like the Computa Gold, these screen designs also affect the voucher that is printed at the Cash Centre i.e. whatever is typed into lines 3, 4, 5, and 6 will be printed on the voucher as well as being displayed to the winner. Anything typed into the other lines (1, and 2), will not.
Therefore as you are designing these screens you are designing the Cash Centre voucher for this bonus as well - see "Design C/G Random Bonus Screens".

Remember as well that these screens are displayed 2 lines at a time so be careful to try and phrase them in such a way as each couplet makes sense by itself.

When a bonus is won, as soon as it is displayed, a log of the event is printed on the system printer. The log notes the time, the players number, and the type of bonus won; for an example see "Printed Logs" at the end of this section.

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An example of a screen designed to describe a \$5.00 cash prize could look like this:-

Screen 16 - Random Bonus 1

Line 1.	CPL:16.	VP: 1.	HP: 4.	Message:	Great Work!
Line 2.	CPL:16.	VP: 2.	HP: 4.	Message:	Prefername
Line 3.	CPL:16.	VP: 3.	HP: 1.	Message:	* You have won *
Line 4.	CPL:16.	VP: 4.	HP: 1.	Message:	** \$5.00 CASH **
Line 5.	CPL:16.	VP: 5.	HP: 2.	Message:	Collect it at
Line 6.	CPL:16.	VP: 6.	HP: 1.	Message:	the Cash Centre

Note :

Once again, do not change the value of a random bonus before either resetting the files (option K in the main menu), or printing out a copy of all accrued points and bonuses to find out how many are outstanding ("Print Current Balances" under option J in the main menu).